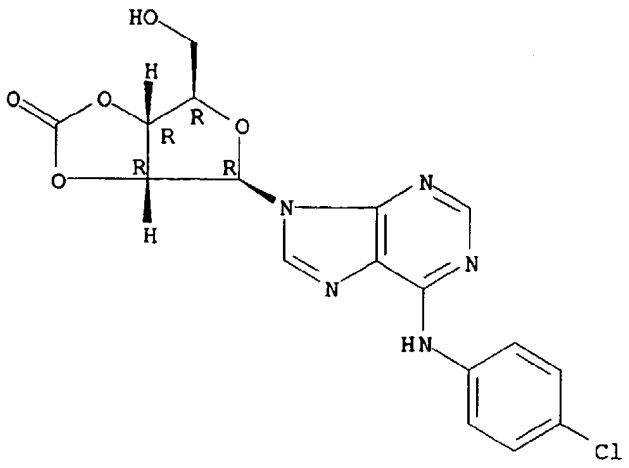
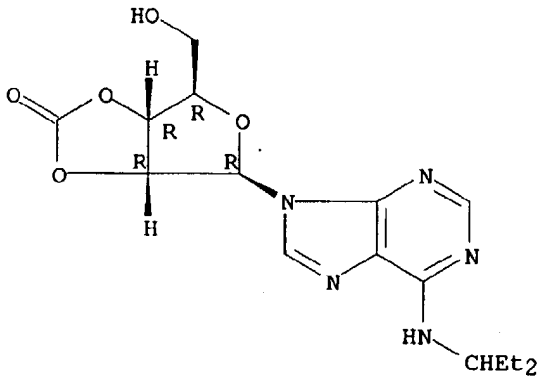


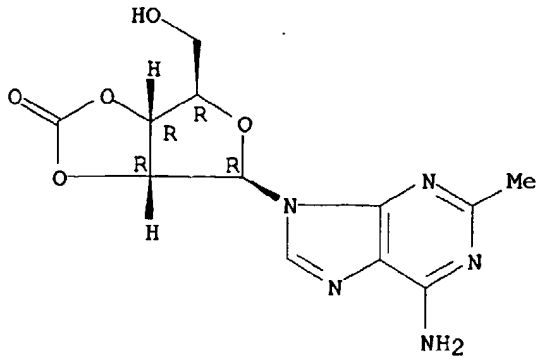
RN 141426-42-8 HCAPLUS
CN Adenosine, N-(1-ethylpropyl)-, cyclic 2',3'-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



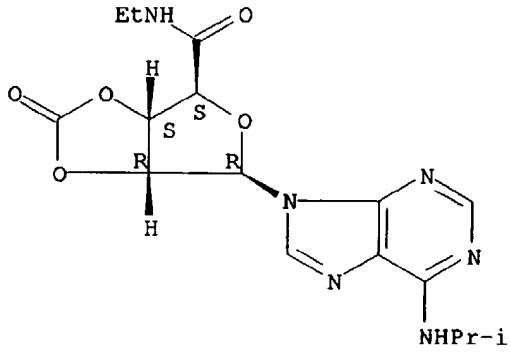
RN 141426-43-9 HCAPLUS
CN Adenosine, 2-methyl-, cyclic 2',3'-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

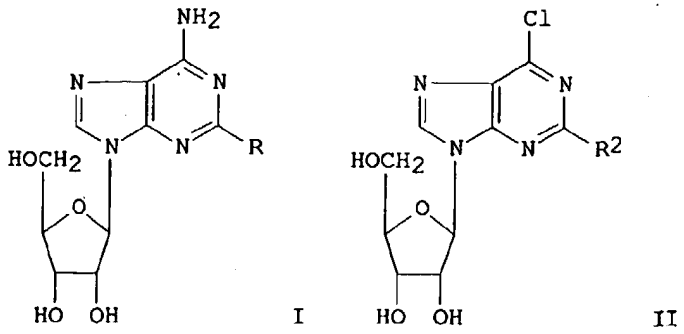


RN 141448-37-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-deoxy-N-ethyl-1-[6-[(1-methylethyl)amino]-9H-purin-9-yl]-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

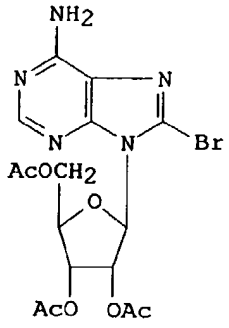


L29 ANSWER 19 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:59857 HCAPLUS
DOCUMENT NUMBER: 116:59857
TITLE: Nucleosides and nucleotides. 103. 2-Alkynyladenosines: a novel class of selective adenosine A2 receptor agonists with potent antihypertensive effects
AUTHOR(S): Matsuda, Akira; Shinozaki, Misao; Yamaguchi, Toyofumi; Homma, Hiroshi; Nomoto, Rie; Miyasaka, Tadashi; Watanabe, Yohko; Abiru, Toichi
CORPORATE SOURCE: Fac. Pharm. Sci., Hokkaido Univ., Sapporo, 060, Japan
SOURCE: Journal of Medicinal Chemistry (1992), 35(2), 241-52
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 116:59857
GI



I

II



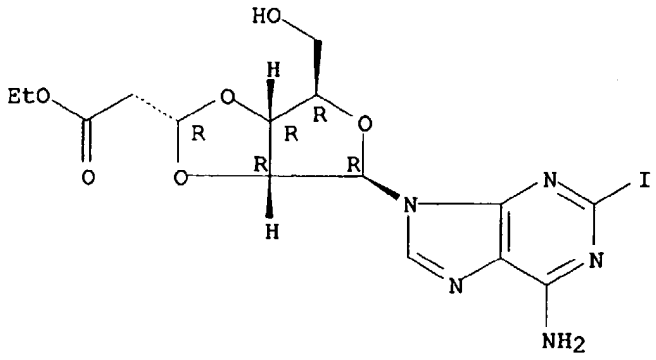
III

AB The synthesis and receptor-binding activities at A1 and A2 adenosine receptors for a series of 2-alkynyladenosines, are described. The Pd-catalyzed cross-coupling reaction of 2-iodoadenosine (I; R = iodo) with various terminal alkynes in the presence of bis(triphenylphosphine)palladium dichloride and CuI in DMF contg. NEt3 gives 2-alkynyladenosines I [R = C.tplbond.CR2,R2 = Et, Pr, Bu, pentyl, hexyl, heptyl, octyl, decyl, dodecyl, tetradecyl, hexadecyl, CH2OH, CH2CH2OH, CH2OMe, CH2O(CH2)3Me]. An economical synthetic method for the prepn. of 9-(2,3,5-tri-O-acetyl-1-.beta.-D-ribofuranosyl)-6-chloro-2-iodopurine (II; R2 = iodo), which is a precursor of I (R = iodo) is also included. Several transformation reactions of 2-(1-octyn-1-yl)adenosine I [R = C.tplbond.C (CH2-Me] and 2-(1-ethyn-1-yl)adenosine I (R = C.tplbond.CH) and a similar cross-coupling reaction of 6-chloropurine deriv. II (R2 = H) and 8-bromoadenosine III with 1-octyne are also reported. Many of these 2-alkynyladenosines tested for A1 and A2 adenosine receptor binding activities in rat brain are selective for the A2 adenosine receptor. Among them, 2-(1-hexyn-1-yl)adenosine has the highest affinity for both A1 and A2 receptors with Ki values of 126.5 and 2.8 nM, resp. The structure-activity relationship of this series of compds. including 6- or 8-alkynylpurine nucleosides and 2-alkyl- and 2-alkenyladenosines is discussed in terms of potency at both receptor subtypes. Addnl., how hypotensive activity and heart rate decrease brought on by I (R = C.tplbond.CR3) and some other compds. with spontaneously **hypertensive** rats are proportional to the order of the potency to both A1 and A2 binding affinities, are described. Thus, 2-alkynyladenosines are interesting and promising as antihypertensive agents that should be considered for further detailed preclin. evaluation.

IT **137915-39-0P 137915-40-3P**

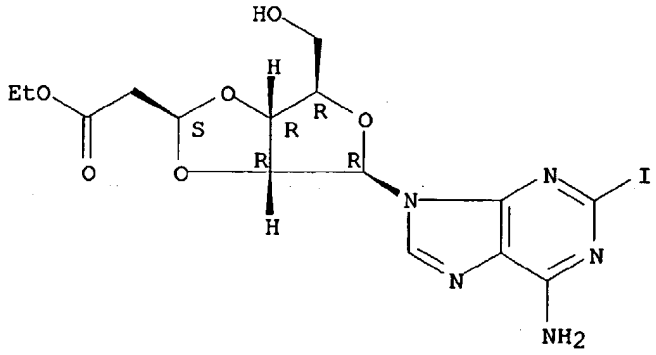
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 137915-39-0 HCAPLUS
CN Adenosine, 2',3'-O-(3-ethoxy-3-oxopropylidene)-2-iodo-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 137915-40-3 HCAPLUS
CN Adenosine, 2',3'-O-(3-ethoxy-3-oxopropylidene)-2-iodo-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



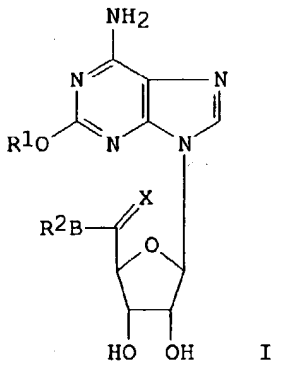
L29 ANSWER 20 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:6922 HCAPLUS
DOCUMENT NUMBER: 116:6922
TITLE: Preparation of 2-aralkoxy- and 2-alkoxyadenosine derivatives as coronary **vasodilators** and antihypertensive agents
INVENTOR(S): Olsson, Ray A.; Thompson, Robert D.
PATENT ASSIGNEE(S): Whitby Research, Inc., USA
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9113082	A1	19910905	WO 1991-US1023	19910214
W: AU, BB, BG, BR, CA, FI, HU, JP, KP, KR, LK, MC, MG, MW, NO, RO, SD, SU				
RW: AT, BE, BF, BJ, CF, CG, CH, CM, DE, DK, ES, FR, GA, GB, GR, IT, LU, ML, MR, NL, SE, SN, TD, TG				
US 5140015	A	19920818	US 1990-482282	19900220
AU 9173255	A1	19910918	AU 1991-73255	19910214
AU 645784	B2	19940127		
EP 515514	A1	19921202	EP 1991-904813	19910214
EP 515514	B1	20000830		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 05506436	T2	19930922	JP 1991-505571	19910214
JP 3160611	B2	20010425		
AT 195946	E	20000915	AT 1991-904813	19910214
ES 2150903	T3	20001216	ES 1991-904813	19910214
CA 2074853	AA	19940130	CA 1992-2074853	19920729
US 36494	E	20000111	US 1993-98180	19930726

PRIORITY APPLN. INFO.: US 1990-482282 A 19900220
WO 1991-US1023 A 19910214

OTHER SOURCE(S): MARPAT 116:6922
GI



I

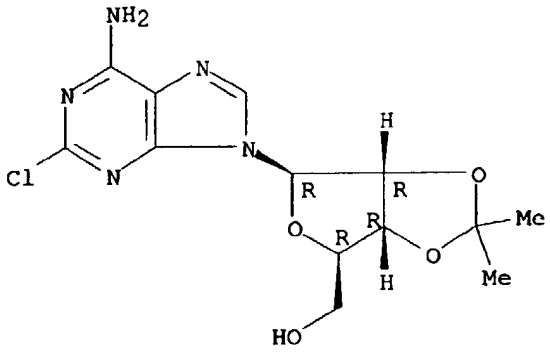
AB Title compds. I [R1 = (substituted) C1-6 hydrocarbyl, cyclic hydrocarbyl, (substituted) Ph, (substituted) thienyl, (substituted) naphthyl, (substituted) indolyl, etc.; R2 = (hydroxy) C1-4 hydrocarbyl; X = 2H or O; B = O, N; with provisos] were prepd. as adenosine A2 receptor agonists useful as coronary **vasodilators** and antihypertensives. Thus, n-BuLi in hexanes was added to a soln. of 4-FlC6H4(CH2)2OH in THF at 10.degree.. The soln. was stirred 15 min at room temp., then 2-chloro-2',3'-O-(ethoxymethylidene)adenosine was added and the mixt. was refluxed 4 days. The resulting product was deprotected by HOAc hydrolysis to give 2-[2-(4-fluorophenyl)ethoxy]adenosine (II). II at 0.9 nM gave a half-maximal increase in coronary blood flow in guinea pigs vs. 49.7 nM

for adenosine.

IT **24639-06-3 56720-43-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(alkoxylation of, in prepn. of adenosine A2 receptor agonists)

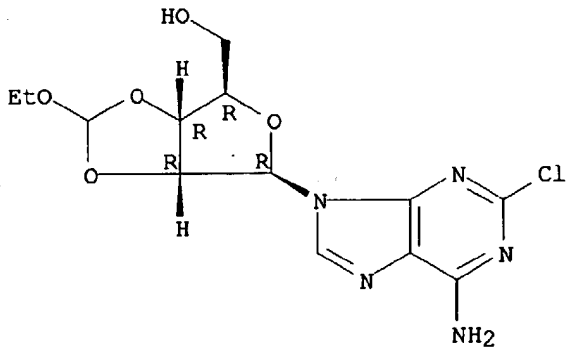
RN 24639-06-3 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 56720-43-5 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(ethoxymethylene)- (9CI) (CA INDEX NAME)

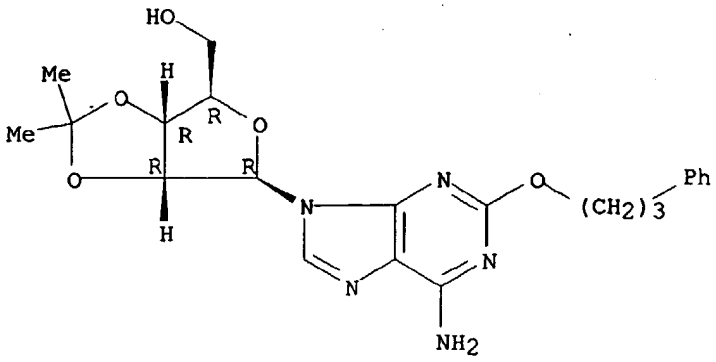
Absolute stereochemistry.



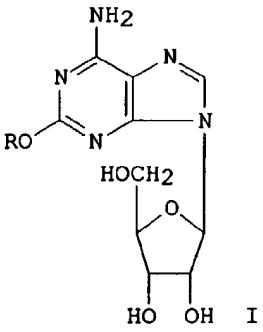
IT **137817-86-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and hydrolysis of, in prepn. of adenosine A2 receptor agonists)

RN 137817-86-8 HCAPLUS
CN Adenosine, 2',3'-O-(1-methylethylidene)-2-(3-phenylpropoxy)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 21 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:185903 HCAPLUS
DOCUMENT NUMBER: 114:185903
TITLE: 2-Aralkoxyadenosines: potent and selective agonists at the coronary artery A2 adenosine receptor
AUTHOR(S): Ueeda, Masayuki; Thompson, Robert D.; Arroyo, Luis H.; Olsson, Ray A.
CORPORATE SOURCE: Dep. Intern. Med., Univ. South Florida, Tampa, FL, 33612, USA
SOURCE: Journal of Medicinal Chemistry (1991), 34(4), 1340-4
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



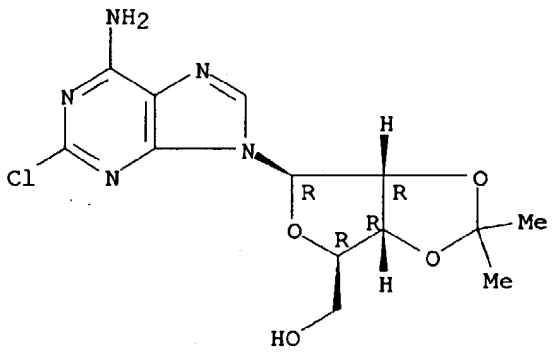
AB A Langendorff guinea pig heart prepn. served for the assay of agonist potency of 26 2-aralkoxyadenosines I (R = Ph, Ph(CH2)n, R1C6H4CH2CH2, R2CH2CH2, n = 2-5; R1 = 2-, 3-, 4-F, 2-, 3-, 4-Cl, 2-, 3-, 4-MeO, 2-, 3-, 4-Me, R2 = 2-, 3-thienyl, 3-indolyl, 1-, 2-naphthyl, 3,4-(MeO)2C6H3, 3,4,5-(MeO)3C6H2] at the A1 and A2 receptors of, resp., the atrioventricular node (conduction block) and coronary arteries (**vasodilation**). All of the analogs are weak agonists at the A1 receptor, requiring concns. >9 .mu.M to cause heart block. At the A2 receptor 2-phenethoxyadenosine (I; R= PhCH2CH2) is the most potent of the 2-phenylalkyladenosines. The activity of ring-substituted (F, Cl, CH3,

and OCH3) 2-phenethoxyadenosines increases ortho < meta < para. The EC50s of coronary **vasodilation** of 190 pM and an A1/A2 selectivity ratio of 44000. Aryl groups such as thienyl, indoloyl, or naphthyl also support A2 agonist activity. Although the 2-oxoadenosine is 3 times more potent than 2-aminoadenosine, the activities of the Ph derivs. are markedly different; 2-phenoxyadenosine (I; R = Ph) is 23 times weaker than 2-(phenylamino)adenosine (CV-1808).

IT **24639-06-3 56720-43-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with lithium alkoxides or phenoxides, aralkoxyadenosines via)

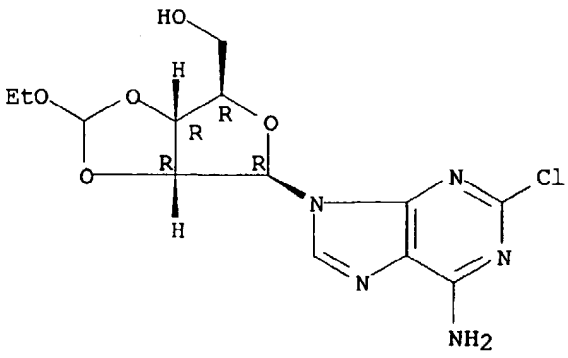
RN 24639-06-3 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 56720-43-5 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(ethoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 22 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:185902 HCAPLUS
DOCUMENT NUMBER: 114:185902
TITLE: 2-Alkoxyadenosines: potent and selective agonists at the coronary artery A2 adenosine receptor

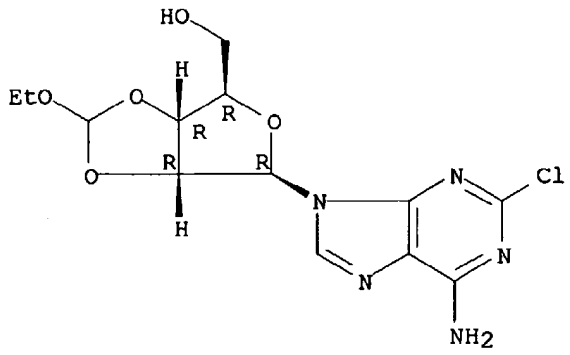
AUTHOR(S): Ueeda, Masayuki; Thompson, Robert D.; Arroyo, Luis H.; Olsson, Ray A.
CORPORATE SOURCE: Dep. Intern. Med., Univ. South Florida, Tampa, FL, 33612, USA
SOURCE: Journal of Medicinal Chemistry (1991), 34(4), 1334-9
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 114:185902

AB A Langendorff guinea pig heart prepn. served for the assay of agonist activity of a series of 24 2-alkoxyadenosines at the A1 and A2 adenosine receptors of, resp., the atrioventricular node (conduction block) and coronary arteries (**vasodilation**). Activities are low at the A1 receptor and do not show a clear relationship to the size or hydrophobicity of the C(2) substituent. All the analogs are more potent at the A2 receptor, activity varying directly with the size and hydrophobicity of the alkyl group. The most potent analog in this series, 2-(2-cyclohexylethoxy)adenosine, has an EC50 of 1 nM for coronary **vasodilation** and is 8700-fold selective for the A2 receptor.

IT **56720-43-5 131973-27-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with alcs., alkoxyadenosine receptor agonists via)

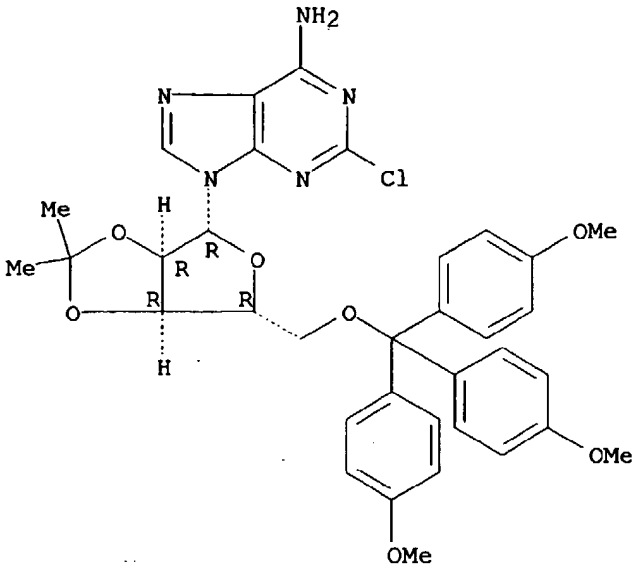
RN 56720-43-5 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(ethoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

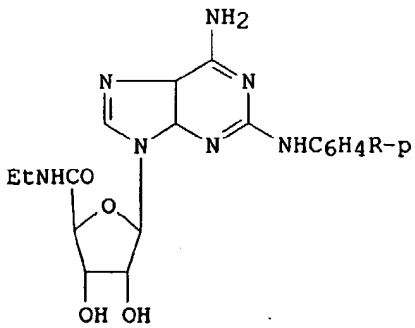


RN 131973-27-8 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(1-methylethylidene)-5'-O-[tris(4-methoxyphenyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 23 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:424426 HCAPLUS
DOCUMENT NUMBER: 113:24426
TITLE: 2-(Arylalkylamino)adenosin-5'-uronamides: a new class of highly selective adenosine A2 receptor ligands
AUTHOR(S): Hutchison, Alan J.; Williams, Michael; De Jesus, Reynalda; Yokoyama, Rina; Oei, Howard H.; Ghai, Geetha R.; Webb, Randy L.; Zoganas, Harry C.; Stone, George A.; Jarvis, Michael F.
CORPORATE SOURCE: Pharm. Div., Ciba-Geigy Corp., Summit, NJ, 07901, USA
SOURCE: Journal of Medicinal Chemistry (1990), 33(7), 1919-24
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 113:24426
GI



I

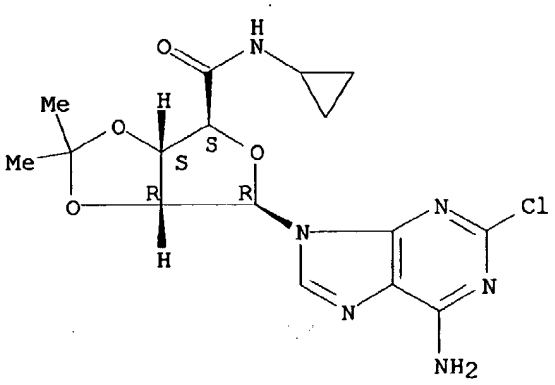
AB The synthesis and receptor-binding profiles at adenosine receptor subtypes for a series of 2-arylalkylamino-adenosine-5'-uronamides is described. Halogenated 2-phenethylamino analogs such as I (R = Cl) show greater than 200-fold selectivity for the A2 receptor subtype on the basis of rat brain receptor binding. The general structure-activity relationship of this series of compds. is discussed both in terms of potency at A2 receptors as well as receptor subtype selectivity. It is possible to introduce a hydrophilic carboxyalkyl substituent to this series such as in CGS 21680A (I; R = HO2CCH2CH2) and still retain good potency and selectivity for A2 receptors. In addn., functional data in a perfused working rat heart model shows that these compds. possess full agonist properties at A2 receptors with I (R = HO2CCH2CH2) having a greater than 1500-fold sepn. betwèen A2 (coronary **vasodilatory**) and A1 (neg. chronotropic) receptor mediated events.

IT **127258-33-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and amination of)

RN 127258-33-7 HCAPLUS

CN .beta.-D-Ribofuranuronamide, 1-(6-amino-2-chloro-9H-purin-9-yl)-N-cyclopropyl-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



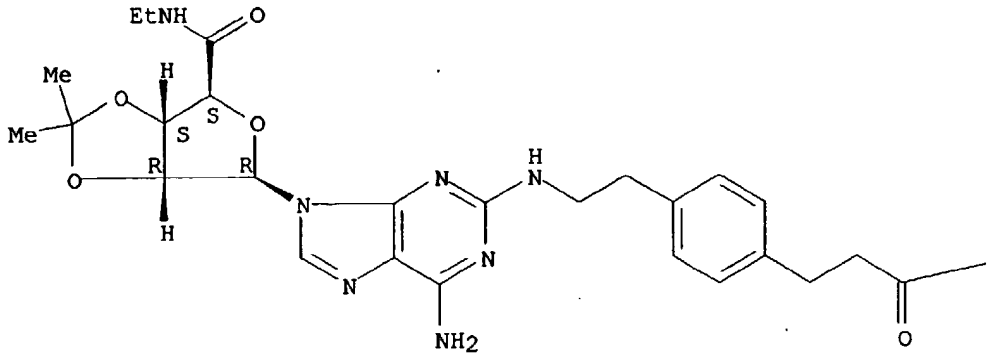
IT **120225-76-5P 120225-77-6P 127258-31-5P**
127258-34-8P 127258-36-0P 127258-38-2P
127258-39-3P 127258-41-7P 127258-43-9P
127258-45-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and deisopropylidenation of)

RN 120225-76-5 HCAPLUS

CN Benzenepropanoic acid, 4-[2-[[6-amino-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-2-yl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

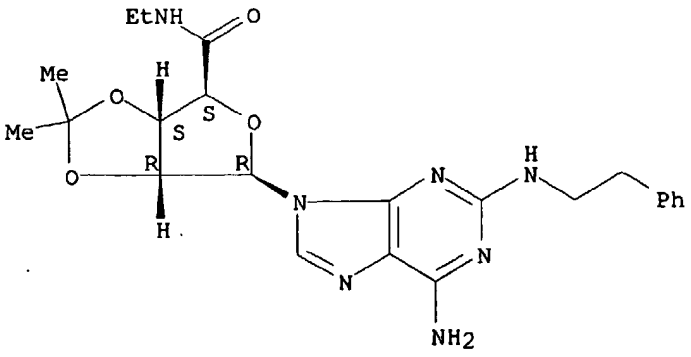


PAGE 1-B

—OBu-t

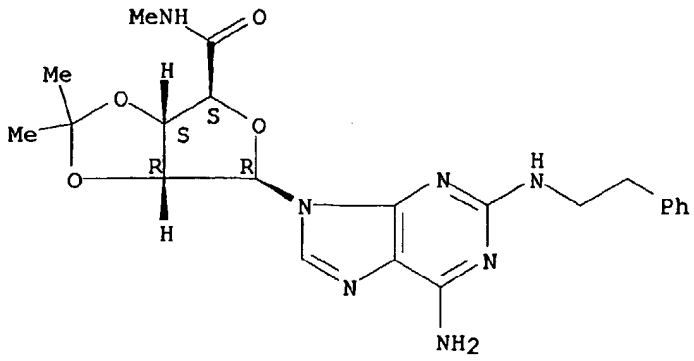
RN 120225-77-6 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[(2-phenylethyl)amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



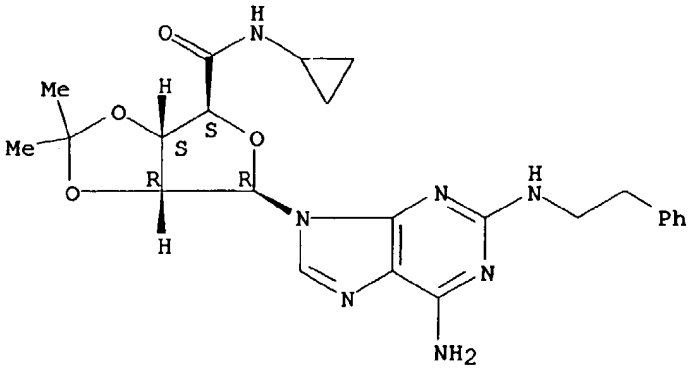
RN 127258-31-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[(2-phenylethyl)amino]-9H-purin-9-yl]-1-deoxy-N-methyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



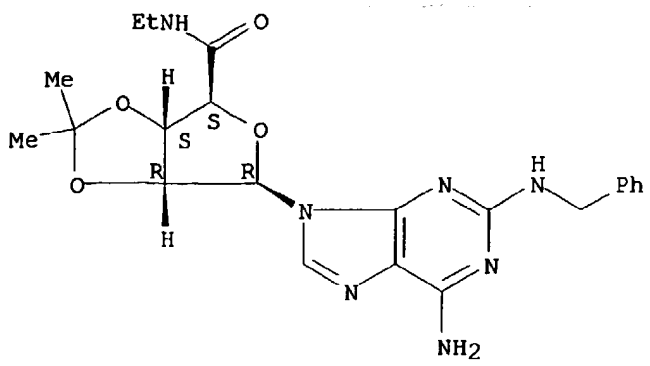
RN 127258-34-8 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[(2-phenylethyl)amino]-9H-purin-9-yl]-N-cyclopropyl-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



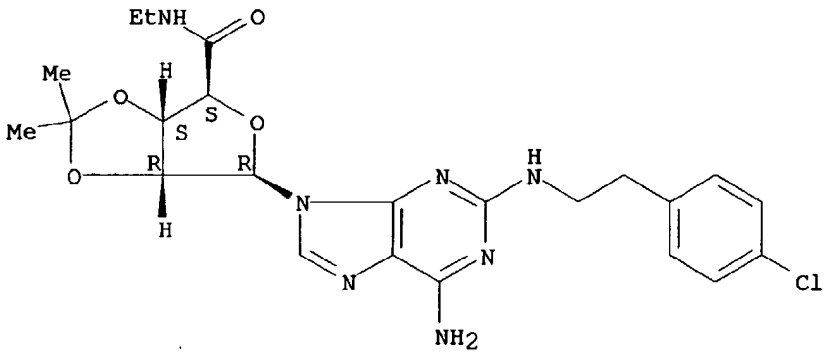
RN 127258-36-0 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[(phenylmethyl)amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



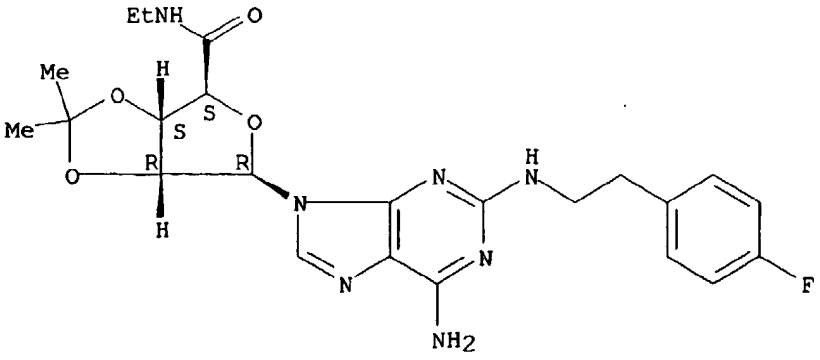
RN 127258-38-2 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[[2-(4-chlorophenyl)ethyl]amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

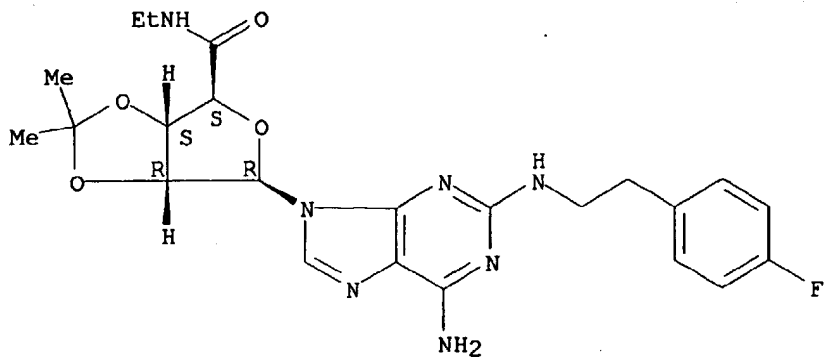
Absolute stereochemistry.



RN 127258-39-3 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[[2-(4-fluorophenyl)ethyl]amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

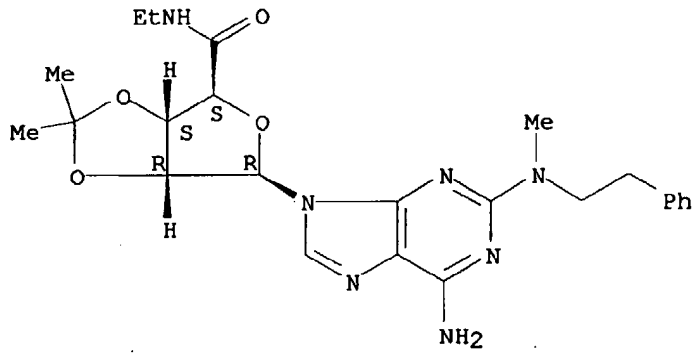
Absolute stereochemistry.





RN 127258-41-7 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[methyl(2-phenylethyl)amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

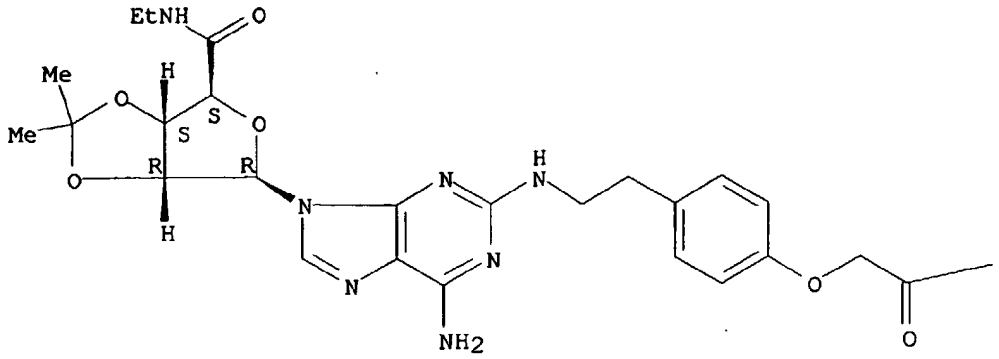
Absolute stereochemistry.



RN 127258-43-9 HCAPLUS
CN Acetic acid, [4-[2-[[6-amino-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-2-yl]amino]ethyl]phenoxy]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

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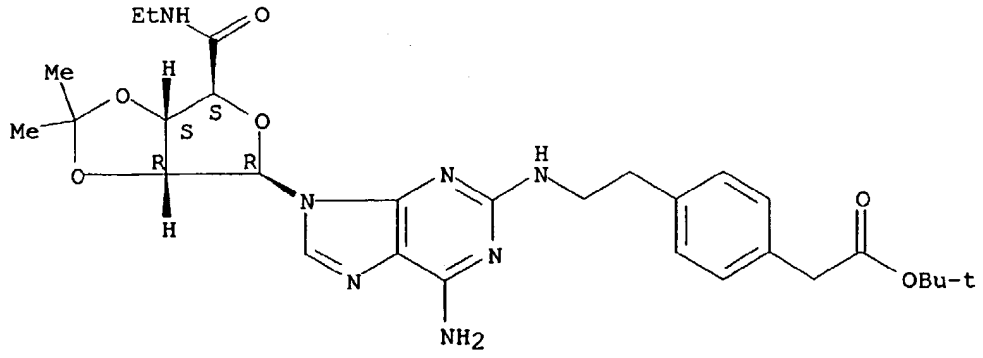
RN 127258-45-1 HCAPLUS
CN Benzeneacetic acid, 4-[2-[[6-amino-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-2-yl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



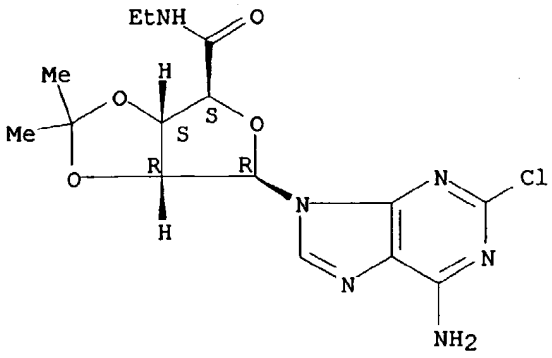
IT **120225-75-4P 127258-29-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and deisopropylidenation or amination of)

RN 120225-75-4 HCAPLUS

CN .beta.-D-Ribofuranuronamide, 1-(6-amino-2-chloro-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

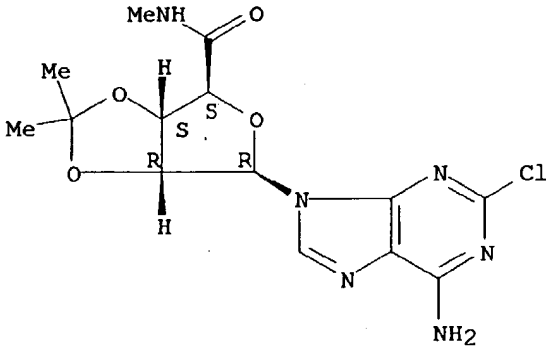
Absolute stereochemistry.



RN 127258-29-1 HCAPLUS

CN .beta.-D-Ribofuranuronamide, 1-(6-amino-2-chloro-9H-purin-9-yl)-1-deoxy-N-methyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **24639-06-3P**

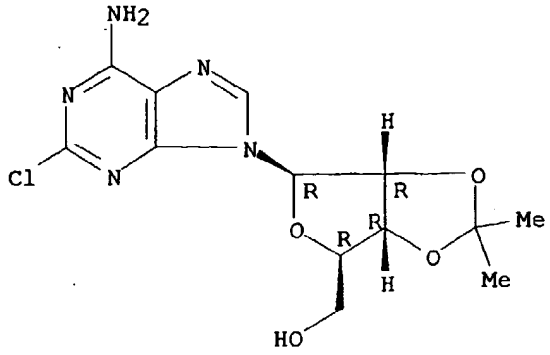
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and permanganate oxidn. of)

RN 24639-06-3 HCAPLUS

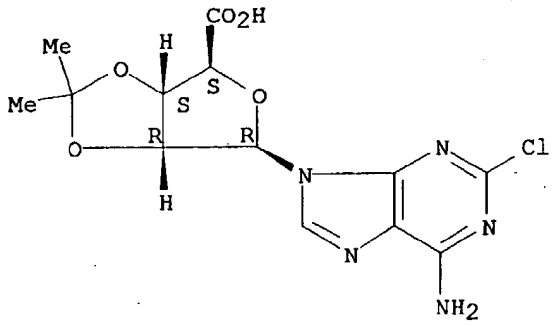
CN Adenosine, 2-chloro-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **72209-19-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn., chlorination, and amidation of)
RN 72209-19-9 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-2-chloro-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



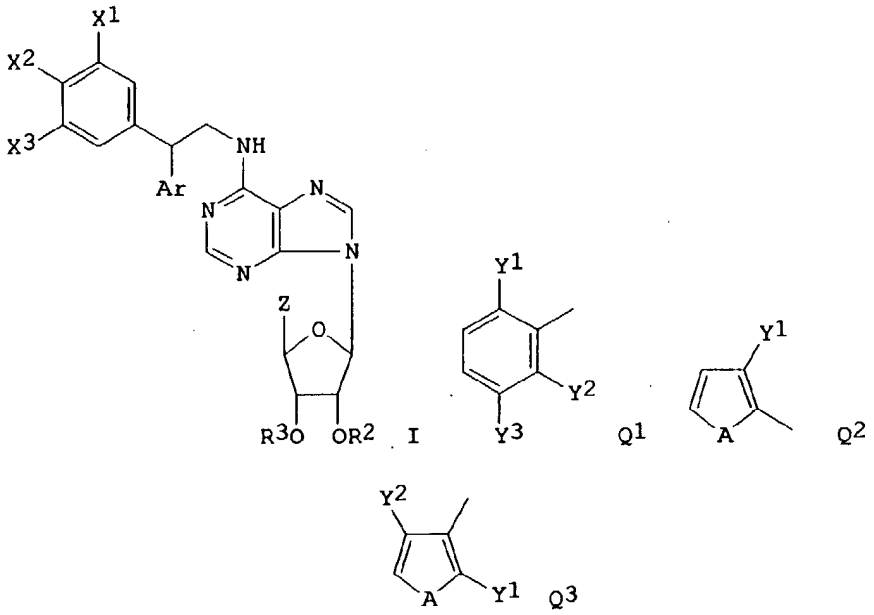
L29 ANSWER 24 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:497690 HCAPLUS
DOCUMENT NUMBER: 111:97690
TITLE: Preparation of N-6-aralkyladenosines having selective adenosine A2 receptor binding activity and pharmaceutical compositions containing them
INVENTOR(S): Bridges, Alexander James; Ortwine, Daniel Fred; Trivedi, Bharat Kalidas
PATENT ASSIGNEE(S): Warner-Lambert Co., USA
SOURCE: PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 8803147	A1	19880505	WO 1987-US2719	19871019
W: AU, BB, BG, BR, DK, FI, HU, JP, KP, KR, LK, MC, MG, MW, NO, RO, SD, SU, US, US				
RW: AT, BE, BJ, CF, CG, CH, CM, DE, FR, GA, GB, IT, LU, ML, MR, NL, SE, SN, TD, TG				
AU 8782761	A1	19880525	AU 1987-82761	19871019
DK 8803577	A	19880629	DK 1988-3577	19880629
NO 8802887	A	19880629	NO 1988-2887	19880629
PRIORITY APPLN. INFO.:			US 1986-925185	19861031
			US 1987-90830	19870828
			WO 1987-US2719	19871019

OTHER SOURCE(S): MARPAT 111:97690

GI



AB The title compds. [I; Ar = Q1, Q2, Q3; A = O, S; X1, X2, X3, Y1, Y2, Y3 = H, halo, alkyl, alkylthio, alkoxy, etc.; R2, R3 = H, alkanoyl, (substituted) benzoyl; or R2R3 = alkylidene; Z = (substituted) Me, dihydroxyphosphono, etc.] and their pharmaceutically acceptable acid addn. salts, useful as cardiovascular agents, analgesics, antipsychotics, etc., are prepd. (E)-2-(2,6-Dimethylphenyl)nitroethene (prepn. given) was treated with PhMgBr in toluene at -30.degree. and the resulting diarylnitroethene was reduced with LiAlH4 to give 2-(2,6-dimethylphenyl)-2-phenylethylamine, which was refluxed with 6-chloropurine riboside in EtOH contg. Et3N for 15 h to give N-6-[2-(2,6-dimethylphenyl)-2-phenylethyl]adenosine (II). In an adenosine receptor binding study, II was > 6 times more strongly bound to A2 receptors than to A1 receptors.

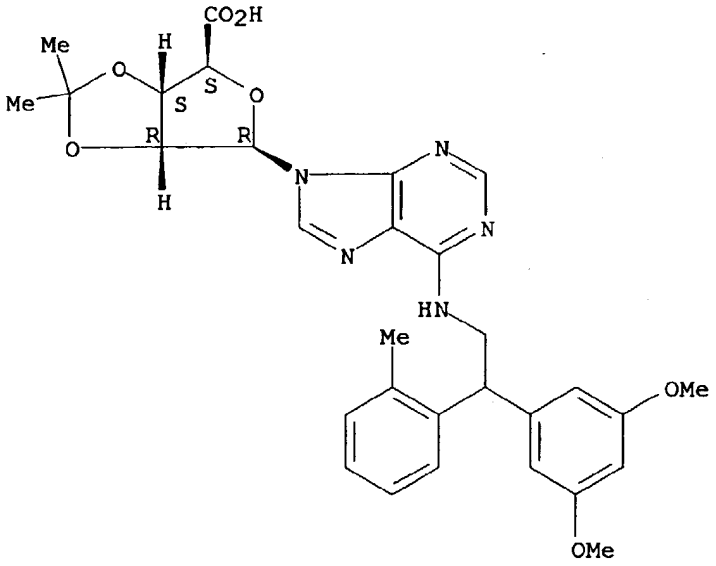
IT **120355-78-4P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, in prepn. of adenosine derivs. as analgesic and cardiovascular and CNS agents)

RN 120355-78-4 HCAPLUS

CN .beta.-D-Ribofuranuronic acid, 1-deoxy-1-[6-[[2-(3,5-dimethoxyphenyl)-2-(2-methylphenyl)ethyl]amino]-9H-purin-9-yl]-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 25 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:213284 HCAPLUS
DOCUMENT NUMBER: 110:213284
TITLE: Preparation of 1'-deoxy-1'-(6-amino-9-purinyl)]-.beta.-D-ribofuranuronic acid amides and thioamides as antihypertensives and pharmaceutical compositions containing them
INVENTOR(S): Gadient, Fulvio; Vogel, Arnold
PATENT ASSIGNEE(S): Sandoz A.-G., Switz.
SOURCE: Brit. UK Pat. Appl., 35 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

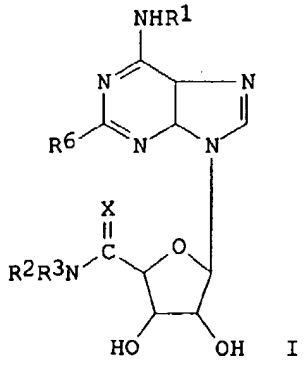
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2203149	A1	19881012	GB 1988-7750	19880331
GB 2203149	B2	19910213		
DE 3810551	A1	19881103	DE 1988-3810551	19880329
FR 2613367	A1	19881007	FR 1988-4356	19880330

BE 1002151	A5	19900807	BE 1988-374	19880330
CH 676121	A	19901214	CH 1988-1228	19880331
IL 85969	A1	19920329	IL 1988-85969	19880404
AU 8814151	A1	19881006	AU 1988-14151	19880405
AU 609109	B2	19910426		
FI 8801571	A	19881007	FI 1988-1571	19880405
FI 87463	B	19920930		
FI 87463	C	19930111		
DK 8801834	A	19881007	DK 1988-1834	19880405
SE 8801236	A	19881017	SE 1988-1236	19880405
JP 63258892	A2	19881026	JP 1988-84974	19880405
NL 8800862	A	19881101	NL 1988-862	19880405
ES 2007177	A6	19890601	ES 1988-1031	19880405
HU 48902	A2	19890728	HU 1988-1638	19880405
HU 201955	B	19910128		
ZA 8802384	A	19891227	ZA 1988-2384	19880405
AT 8800873	A	19910415	AT 1988-873	19880405
AT 393507	B	19911111		
PL 155212	B1	19911031	PL 1988-271671	19880405
CA 1326017	A1	19940111	CA 1988-563261	19880405
US 5219840	A	19930615	US 1991-693891	19910501

PRIORITY APPLN. INFO.:
DE 1987-3711561 19870406
DE 1987-3711562 19870406
DE 1987-3711563 19870406
DE 1987-3711564 19870406
US 1988-176913 19880404
US 1989-455662 19891221

OTHER SOURCE(S): CASREACT 110:213284; MARPAT 110:213284

GI



I

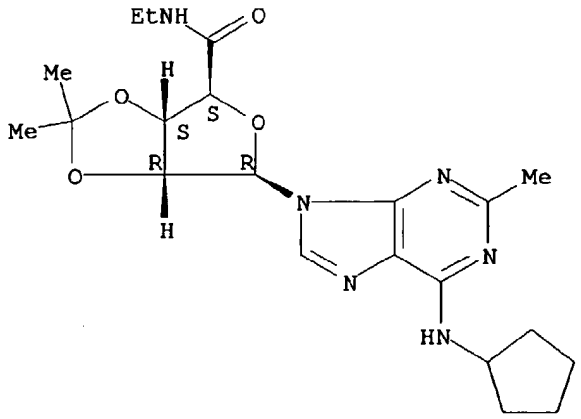
AB The title compds. [I; R1 = H, alkyl, hydroxyalkyl, mercaptoalkyl, aminoalky, cycloalkylalkyl, etc.; R2 = H, alky, hydroxyalky, mercaptoalkyl, aminoalkyl, cycloalkyl, etc.; R3 = H, alkyl, hydroxyalkyl, mercaptoalkyl, aminoalkyl; R6 = halo, alkyl, cycloalkyl, cyano, alkoxy, mercapto, amino, etc.; X = O, S], useful as antihypertensives (no data), are prepd. 1'-Deoxy-1'-(2-methyl-6-cyclopentylamino-9-purinyl)-2,3-isopropylidene-.beta.-D-ribofuranuronic acid N-ethylamide (prepn. given) (1.4 g) in 10 mL 90% F3CCO2H was allowed to stand at room temp. for 1 h to

give 1'-deoxy-1'-(2-methyl-6-cyclopentylamino-9-purinyl)-.beta.-D-ribofuranuronic acid N-ethylamide.

IT **120465-39-6P 120465-42-1P 120465-43-2P 120465-44-3P 120465-45-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of)

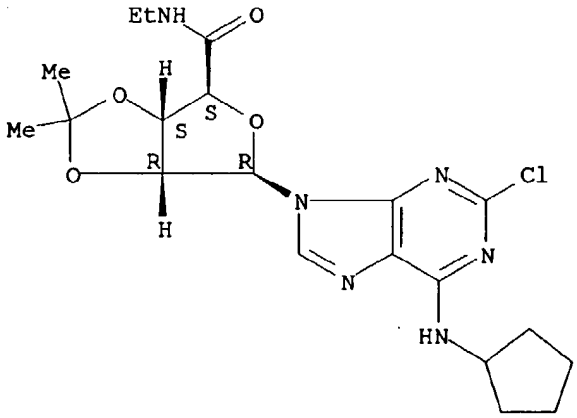
RN 120465-39-6 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-(cyclopentylamino)-2-methyl-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



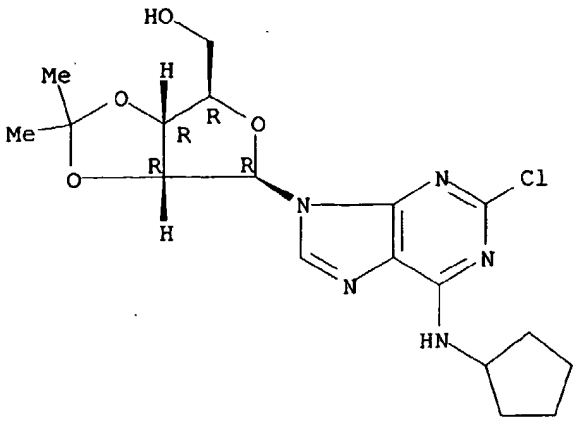
RN 120465-42-1 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[2-chloro-6-(cyclopentylamino)-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



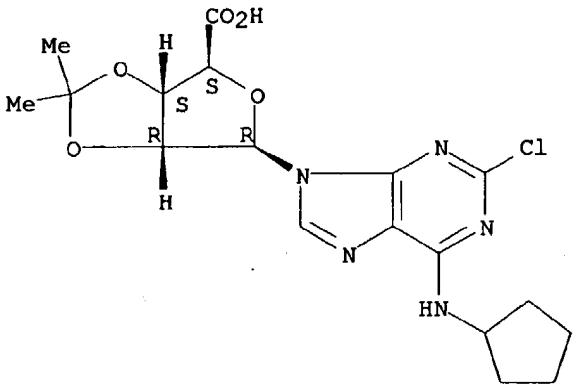
RN 120465-43-2 HCAPLUS
CN Adenosine, 2-chloro-N-cyclopentyl-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



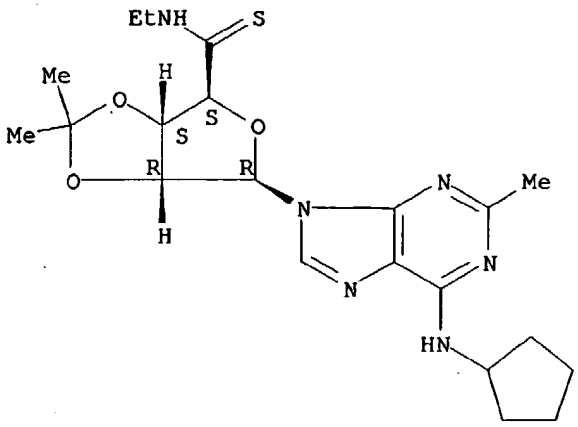
RN 120465-44-3 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-[2-chloro-6-(cyclopentylamino)-9H-purin-9-yl]-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 120465-45-4 HCAPLUS
CN .beta.-D-Ribofuranuronothioamide, 1-[6-(cyclopentylamino)-2-methyl-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

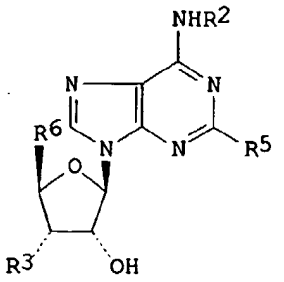
Absolute stereochemistry.



L29 ANSWER 26 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1989:193332 HCAPLUS
DOCUMENT NUMBER: 110:193332
TITLE: Preparation of adenosine-5'-carboxamide derivatives as adenosine-2 receptor agonists, antipsychotics, and antihypertensives and pharmaceutical compositions containing them
INVENTOR(S): Hutchison, Alan J.
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.
SOURCE: Eur. Pat. Appl., 17 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 277917	A2	19880810	EP 1988-810050	19880129
EP 277917	A3	19900328		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
FI 8800405	A	19880805	FI 1988-405	19880129
JP 63201196	A2	19880819	JP 1988-21410	19880202
DD 284679	A5	19901121	DD 1988-312611	19880202
DK 8800544	A	19880805	DK 1988-544	19880203
NO 8800469	A	19880805	NO 1988-469	19880203
AU 8811233	A1	19880818	AU 1988-11233	19880203
HU 46334	A2	19881028	HU 1988-509	19880203
HU 199155	B	19900129		
ZA 8800755	A	19891025	ZA 1988-755	19880203

PRIORITY APPLN. INFO.: US 1987-11169 19870204
OTHER SOURCE(S): MARPAT 110:193332
GI



I

AB The title compds. [I; R2 = H, alkyl, aralkyl; R3 = H, OH; R5 = NRR1 where R = H, alkyl and R1 = cycloalkyl, cycloalkylalkyl, 2-norbornanyl, etc.; R6 = R4NHCO where R4 = H, alkyl, aralkyl, cycloalkyl, hydroxyalkyl] (II) and their pharmaceutically acceptable salts, useful as adenosine-2 receptor agonists, antipsychotics, antithrombotics, and antihypertensives, are prepd. A mixt. of 2-chloro-2',3'-O-isopropylideneadenosine-5'-N-ethylcarboxamide and 2-phenethylamine was heated at 130.degree. for 2 h to give 2-(2-phenethylamino)-2',3'-O-isopropylideneadenosine-5'-N-ethylcarboxamide, which was heated with 1N HCl at 65.degree. for 1 h to give 2-(2-phenethylamino)-5'-N-ethylcarboxamide (III). In vivo studies of the adenosine-2 receptor agonistic activity of II using spontaneously **hypertensive** rats showed that II effectively lowered the blood pressure without any significant effect on the heart rate. One thousand tablets were prepd. from III 100.00, lactose 2400.00, corn starch 125.00, polyethyleneglycol 6000 150.00, Mg stearate 40.00 g, and water q.s.

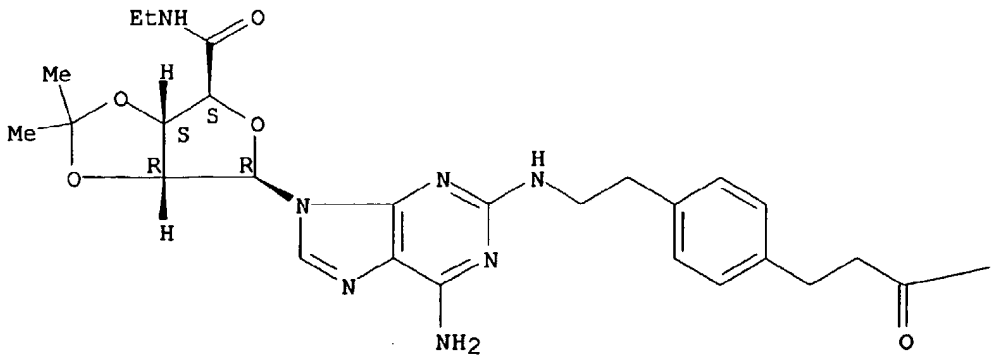
IT **120225-76-5P 120225-77-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, in prepn. of adenosinecarboxamide derivs. as CNS and cardiovascular agents)

RN 120225-76-5 HCAPLUS

CN Benzenepropanoic acid, 4-[2-[[6-amino-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-2-yl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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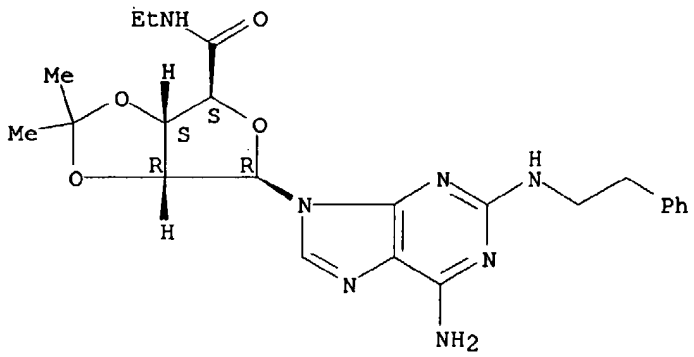
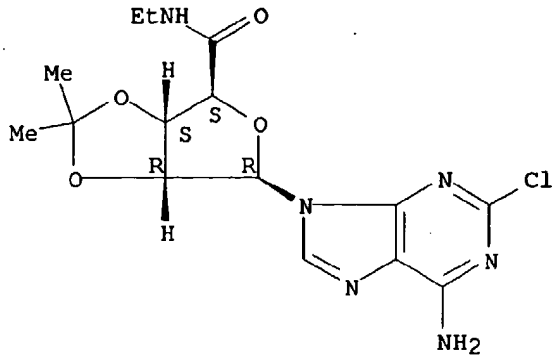
RN 120225-77-6 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-[6-amino-2-[(2-phenylethyl)amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **120225-75-4 120225-76-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in prepn. of adenosinecarboxamide derivs. as CNS and cardiovascular agents)
RN 120225-75-4 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-2-chloro-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

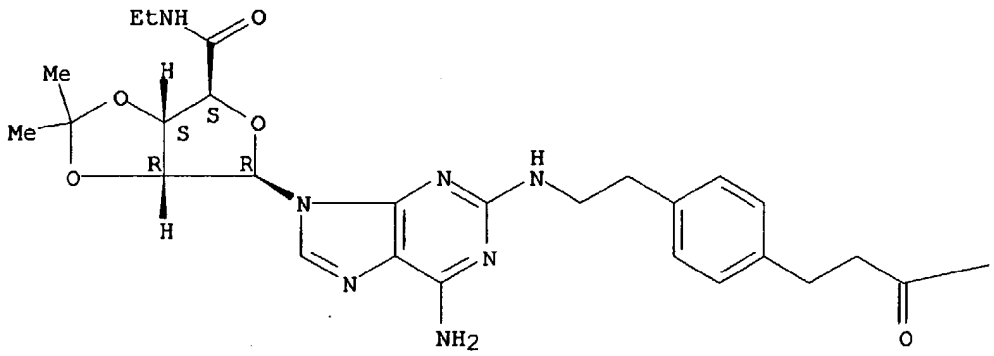
Absolute stereochemistry.



RN 120225-76-5 HCAPLUS
CN Benzenepropanoic acid, 4-[2-[[6-amino-9-[N-ethyl-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronamidosyl]-9H-purin-2-yl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

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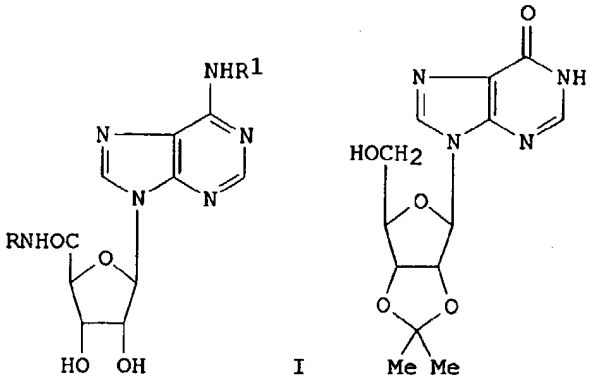
L29 ANSWER 27 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1986:497868 HCAPLUS

DOCUMENT NUMBER: 105:97868
TITLE: N6-Substituted N-alkyladenosine-5'-uronamides: bifunctional ligands having recognition groups for A1 and A2 adenosine receptors
AUTHOR(S): Olsson, R. A.; Kusachi, Shozo; Thompson, Robert D.; Ukena, Dieter; Padgett, William; Daly, John W.
CORPORATE SOURCE: Coll. Med., Univ. South Florida, Tampa, FL, 33612, USA
SOURCE: Journal of Medicinal Chemistry (1986), 29(9), 1683-9
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 105:97868
GI

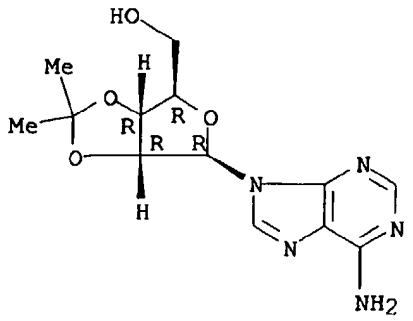


AB Nineteen title uronamides I (R = Et, Me2CH, Me, PhCH2, etc; R1 = Me, Et2CH, cyclohexyl, p-MeOC6H4, Et2CH, etc.) were prepd. from inosine II by sequential oxidn. with CrO3 to give uronic acid, treatment with SO2Cl2 in DMF to give 6-chloro-5'-uronic acid chloride, amidation with RNH2 to give 6-chloro uronamides, and a treatment with R1NH2 at elevated temp. to give I. Coronary **vasodilating** activity and potency of I at adenosine receptors are given.

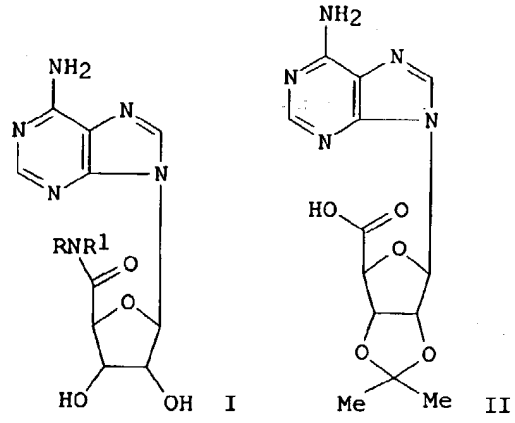
IT **362-75-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidn. of)

RN 362-75-4 HCAPLUS
CN Adenosine, 2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 28 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1980:129239 HCAPLUS
DOCUMENT NUMBER: 92:129239
TITLE: Modification of the 5' position of purine nucleosides. 2. Synthesis and some cardiovascular properties of adenosine-5'-(N-substituted)carboxamides
AUTHOR(S): Prasad, Raj Nandan; Bariana, Dilbagh S.; Fung, Anthony; Savic, Milica; Tietje, Karin; Stein, Herman H.; Brondyk, Harold; Egan, Richard S.
CORPORATE SOURCE: Org. Chem. Res., Abbott Lab., Ltd., Montreal, QC, H3C 3K6, Can.
SOURCE: Journal of Medicinal Chemistry (1980), 23(3), 313-19
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

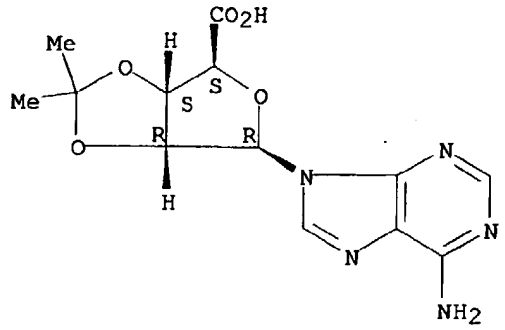


AB About 35 adenosinecarboxamides I [R = H, R1 = Me, Et, PhOCH2CH2, Et2NCH2CH2, cyclopropyl, CH2:CHCH2, Ph, adamantyl, etc.; R = R1 = CH2:CHCH2; or (RNR1) = piperidino, morpholino, etc.] and several analogs of I contg. N1-oxide function or 2',3'-substituents were prepd. from II. II was chlorinated with SOCl2, the acid chloride was amidated, and the product was deisopropylidenated to give I. Alternatively II was deisopropylidenated and then converted into the ClCH2CH2 ester, which was

amidated to give I. All the compds. prepd. were evaluated for coronary sinus PO2 activity in dogs (extensive data given). 1H-NMR spectra of some of the compds. were examd. and conformations are discussed.

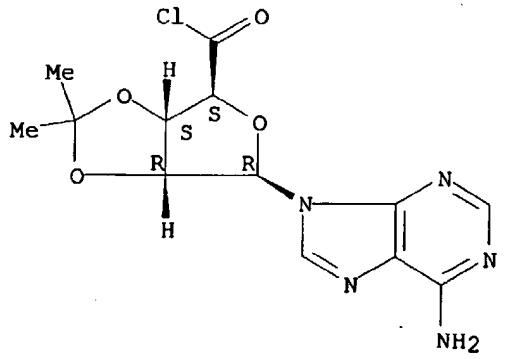
IT **19234-66-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(chlorination or deisopropylidenation of)
RN 19234-66-3 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **39491-49-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and amidation of)
RN 39491-49-1 HCAPLUS
CN .beta.-D-Ribofuranuronoyl chloride, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

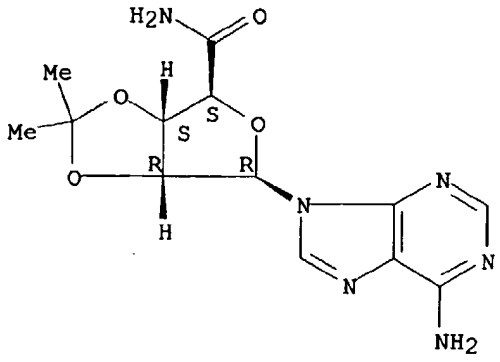
Absolute stereochemistry.



IT **35788-22-8P 54925-48-3P 72758-39-5P 72758-40-8P 72758-41-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and deisopropylidenation of)
RN 35788-22-8 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-

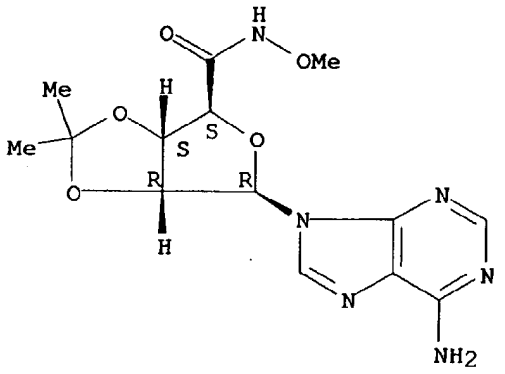
methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



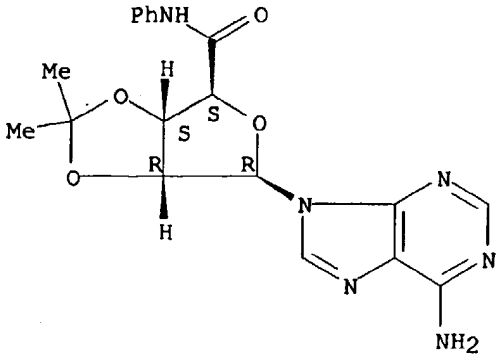
RN 54925-48-3 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-methoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



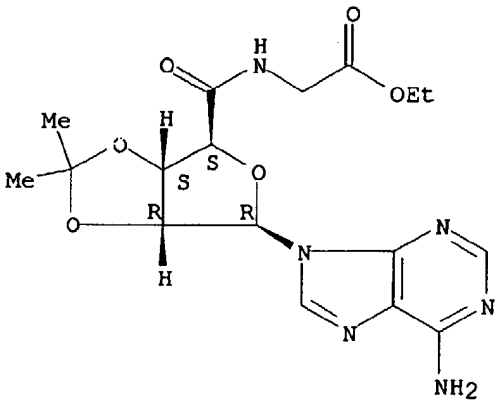
RN 72758-39-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-N-phenyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



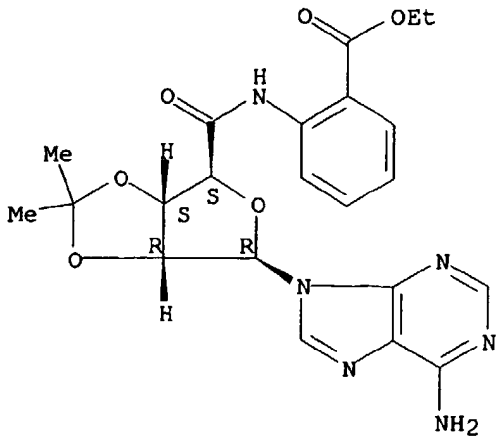
RN 72758-40-8 HCAPLUS
CN Glycine, N-[1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronoyl]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



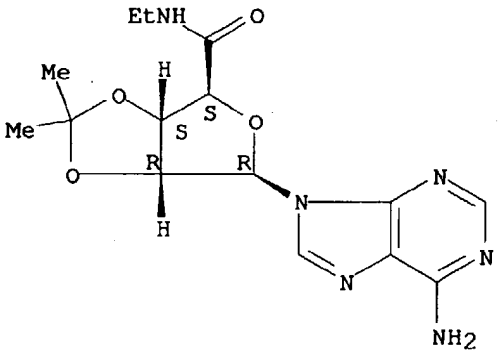
RN 72758-41-9 HCAPLUS
CN Benzoic acid, 2-[[1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-.beta.-D-ribofuranuronoyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



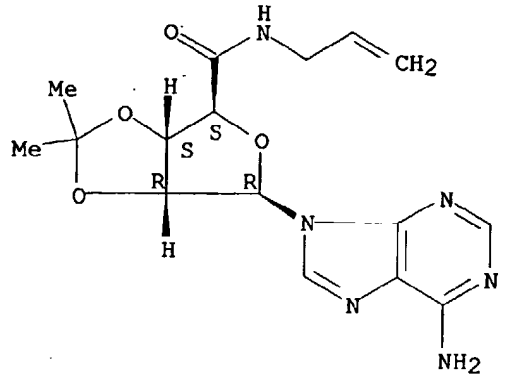
IT **39491-53-7P 58048-27-4P 58048-28-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn., deisopropylidenaton, and cardiovascular properties of)
RN 39491-53-7 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



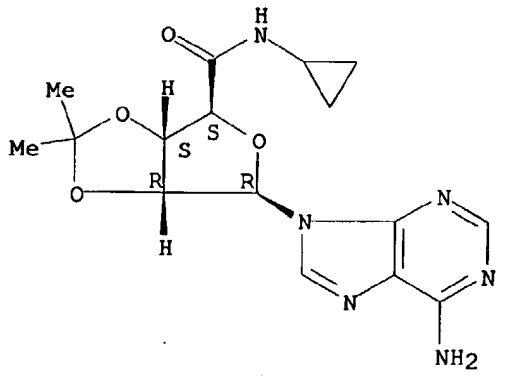
RN 58048-27-4 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-N-2-propenyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 58048-28-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-N-cyclopropyl-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 29 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1979:538137 HCAPLUS
DOCUMENT NUMBER: 91:138137
TITLE: Inhibition of adenosine uptake in human erythrocytes by adenosine-5'-carboxamides, xylosyladenine, dipyridamole, hexobendine, and p-nitrobenzylthioguanosine
AUTHOR(S): Turnheim, Klaus
CORPORATE SOURCE: Pharmakol. Inst., Univ. Wien, Vienna, Austria
SOURCE: Biochemical Pharmacology (1978), 27(18), 2191-7
CODEN: BCPCA6; ISSN: 0006-2952
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Adenosine (I) uptake by human erythrocytes at 0.degree. consisted of a saturable and a concn.-proportional component, the latter representing uptake into a pericellular compartment inaccessible to inulin. The apparent Km for I was 2.4 .times. 10-6M. Xylosyladenine and adenosine-5'-carboxamide derivs. were weak inhibitors of the saturable

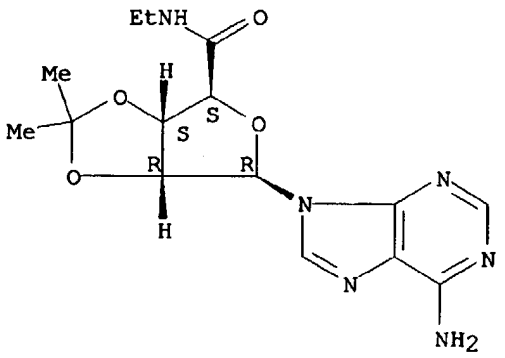
component of I uptake with apparent Ki values .gtoreq.10-fold higher than the Km for I. The affinity of the I nucleosides appeared to depend on the 3'-hydroxyl group and its erythro configuration, and also on the 5'-substituent. Dipyridamole, hexobendine, and p-nitrobenzylthioguanosine had Ki values .gtoreq.10-fold lower than the Km for I. The steric requirements for the binding of adenine furanosides to the putative smooth muscle receptors mediating **vasodilation**, and of the saturable cellular uptake mechanism, were different.

IT **39491-53-7**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(adenosine transport by erythrocyte response to)

RN 39491-53-7 HCAPLUS

CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 30 OF 39 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1979:80897 HCAPLUS

DOCUMENT NUMBER: 90:80897

TITLE: Effects of a 2',3',5'-substituted adenosine derivative on systemic and coronary hemodynamics and on cardiac metabolism in the anesthetized dog

AUTHOR(S): Schuetz, W.; Raberger, G.; Kraupp, O.

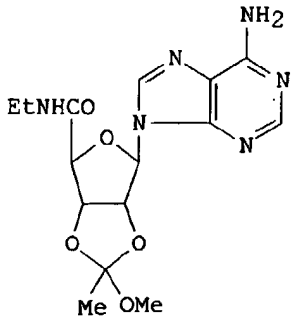
CORPORATE SOURCE: Pharmakol. Inst., Univ. Wien, Vienna, Austria

SOURCE: Arzneimittel-Forschung (1978), 28(11), 2079-82
CODEN: ARZNAD; ISSN: 0004-4172

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



I

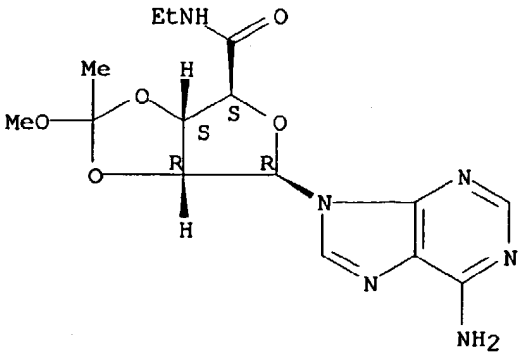
AB The adenosine deriv. 744-98 (I) **[62622-78-0]** (5 .mu.g/kg, i.v.) increased 5 fold the coronary sinus outflow in anesthetized, closed chest dogs. This increase remained 3 times higher than the control level 4 h after I administration. Total peripheral resistance decreased markedly, accompanied by a baroreceptor-mediated increased in heart rate, left ventricular pressure curve, and myocardial O consumption. The myocardial O extn. ratio for glucose [50-99-7] greatly exceeded the aerobic metabolic requirement. Blood sugar levels and glucose uptake by the heart increased, whereas plasma free fatty acid levels decreased markedly, without consistent changes in myocardial free fatty acid balance.

IT **62622-78-0**
RL: BIOL (Biological study)
(circulation and heart metab. response to)

RN 62622-78-0 HCAPLUS

CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methoxyethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 31 OF 39 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1979:67008 HCAPLUS

DOCUMENT NUMBER: 90:67008

TITLE: Evidence for glucagon-releasing activity of vasoactive adenosine analogs in the conscious dog

AUTHOR(S): Schuetz, W.; Raberger, G.; Kraupp, O.

CORPORATE SOURCE: Pharmakol. Inst., Univ. Wien, Vienna, Austria

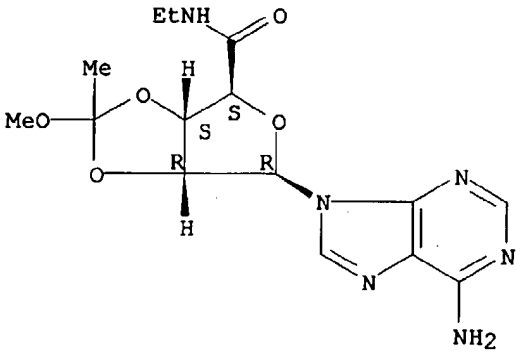
SOURCE: Naunyn-Schmiedeberg's Archives of Pharmacology (1978), 304(3), 249-54
CODEN: NSAPCC; ISSN: 0028-1298
DOCUMENT TYPE: Journal
LANGUAGE: English

AB An investigation was carried out in conscious dogs concerning the effects of 3 adenosine derivs., 744-96 [35920-39-9], 744-98 [**62622-78-0**], 744-99 [61014-07-1], with pronounced and long-lasting coronary dilator activity, on glucagon [9007-92-5] release. All 3 compds. (10 .mu.g/kg, i.v.) induced a sustained increase in plasma glucose and a decrease in plasma free fatty acids concn.; concomitantly, plasma glucagon levels rose 2-3 fold. Changes in plasma insulin [9004-10-8] concn. were relatively small and not significant. A simultaneous fall in arterial blood pressure was also obsd. A lowering of blood pressure of similar magnitude by Na nitroprusside infusion in control expts. failed to show any effect on plasma glucagon level.

IT **62622-78-0**
RL: BIOL (Biological study)
(glucagon release response to)

RN 62622-78-0 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methoxyethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 32 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1978:499693 HCAPLUS
DOCUMENT NUMBER: 89:99693
TITLE: Coronary dilatory action of adenosine analogs: a comparative study
AUTHOR(S): Raberger, G.; Schuetz, W.; Kraupp, O.
CORPORATE SOURCE: Pharmakol. Inst., Univ. Wien, Vienna, Austria
SOURCE: Archives Internationales de Pharmacodynamie et de Therapie (1977), 230(1), 140-9
CODEN: AIPTAK; ISSN: 0003-9780
DOCUMENT TYPE: Journal
LANGUAGE: English

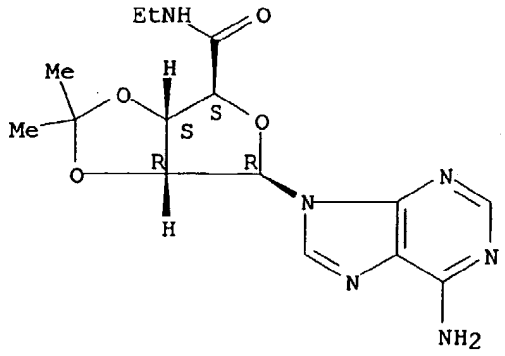
AB The coronary-dilatory action of 23 adenosine [58-61-7] analogs was investigated on a comparative basis after i.v. administration to anesthetized dogs. Substitution in position 5' of adenosine with a CO2H group and esterification led to a 50-100-fold increase in coronary

efficacy (flow increase integrated over the time of action). Amidation of the carboxylic acid analog further enhanced the coronary efficacy. The most effective analog, adenosine-5'-ethylcarboxamide [35920-39-9], showed 20,000 times greater activity than adenosine. Addnl. substitution in positions 2' and 3' with NO2, O-methoxymethylidene, or O-methoxyethylidene resulted in a delayed onset and prolonged duration of action.

IT **39491-53-7 66822-84-2**
RL: BIOL (Biological study)
(coronary **vasodilatory** activity of)

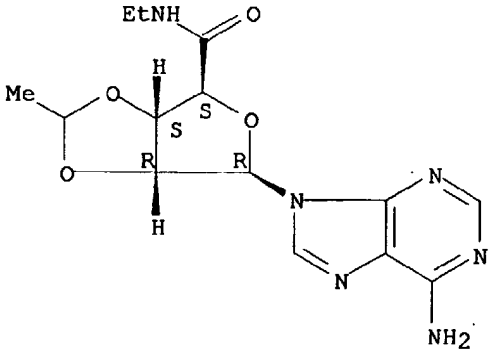
RN 39491-53-7 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 66822-84-2 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-ethylidene- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

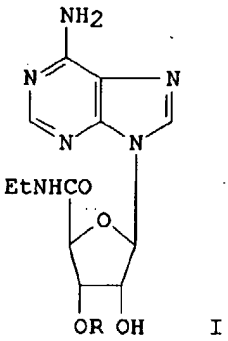


L29 ANSWER 33 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1978:152935 HCAPLUS
DOCUMENT NUMBER: 88:152935
TITLE: Acylated .beta.-D-1-(6-amino-9H-purin-9-yl)-1-deoxyribofuranuronic acid ethyl amides

INVENTOR(S): Klemm, Kurt; Pruesse, Wolfgang; Schoetensack, Wolfgang; Kraupp, Otto
PATENT ASSIGNEE(S): Byk-Gulden Lomberg Chemische Fabrik G.m.b.H., Fed. Rep. Ger.
SOURCE: Ger. Offen., 25 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2730846	A1	19780119	DE 1977-2730846	19770708
PRIORITY APPLN. INFO.:			LU 1976-75374	19760713

GI



I

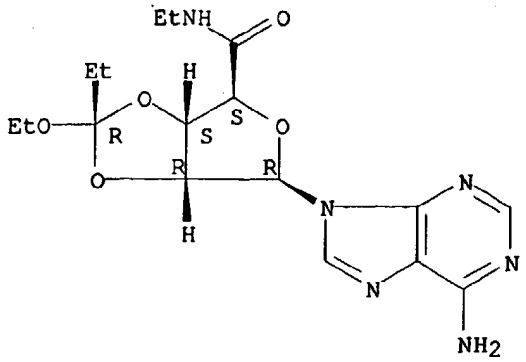
AB The title compds. I (R = Ac, COEt) were prepd. by acylating I (R = H). Thus, I (R = H) was treated with MeC(OMe)3 to give 2,3-O-methoxyethylidene deriv., which was hydrolyzed with aq. HOAc to give 85% I (R = Ac). I had **vasodilator**, antihypertensive, and stimulating effects on the heart (no data).

IT **62622-81-5P 66255-01-4P 66255-02-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and hydrolysis of)

RN 62622-81-5 HCAPLUS

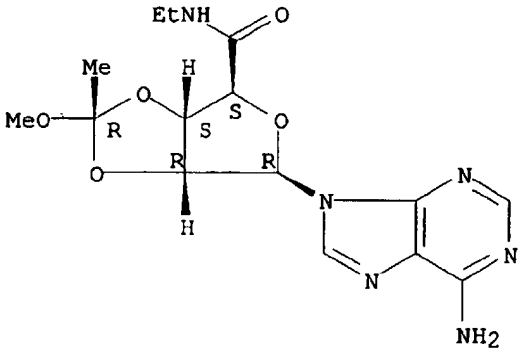
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-ethoxypropylidene)-N-ethyl-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



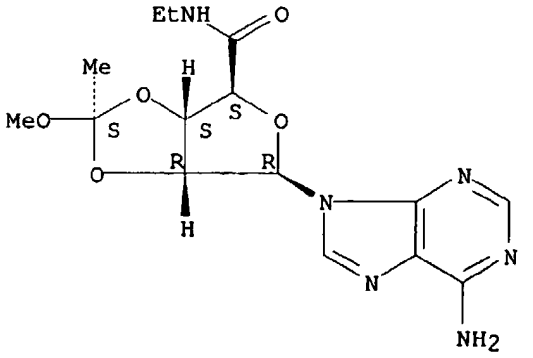
RN 66255-01-4 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-N-ethyl-2,3-O-(1-methoxyethylidene)-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 66255-02-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-N-ethyl-2,3-O-(1-methoxyethylidene)-, (S)- (9CI) (CA INDEX NAME)

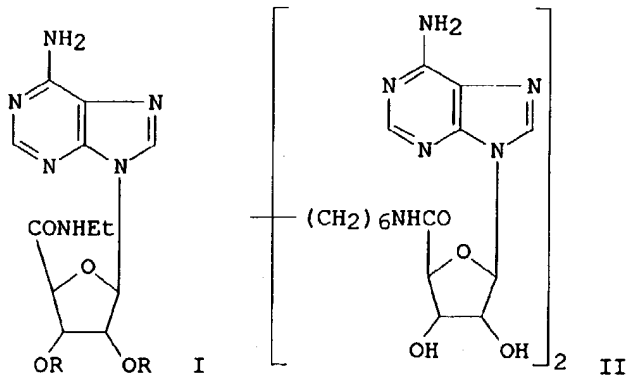
Absolute stereochemistry.



L29 ANSWER 34 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1978:7312 HCAPLUS
DOCUMENT NUMBER: 88:7312
TITLE: .beta.-D-1-(6-Amino-9H-purin-9-yl)-1-deoxyribofuranuronic acid derivatives
INVENTOR(S): Kraupp, Otto
PATENT ASSIGNEE(S): Byk Gulden Lomberg Chemische Fabrik G.m.b.H., Fed. Rep. Ger.
SOURCE: Ger. Offen., 35 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2610985	A1	19770929	DE 1976-2610985	19760316

PRIORITY APPLN. INFO.: DE 1976-2610985 19760316
GI

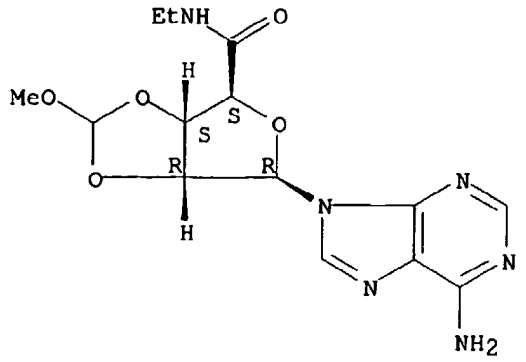


AB The title compds. I (R = NO2, R2 = CHOMe) were prepd. by treating I (R = H) with HNO3 or HC(OMe)3. The amide II was obtained by treating Me ester with H2N(CH2)12NH2. I and II had renal **vasodilator**, antihypertensive, heart stimulant, hypolipemic, and glucose mobilizing activity (no data).

IT **62622-77-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 62622-77-9 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(methoxymethylene)- (9CI) (CA INDEX NAME)

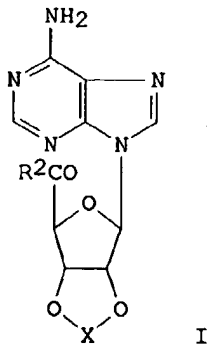
Absolute stereochemistry.



L29 ANSWER 35 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1977:171786 HCAPLUS
DOCUMENT NUMBER: 86:171786
TITLE: 1-Deoxy-2,3-O-alkylideneribofuranuronic acid derivatives
INVENTOR(S): Klemm, Kurt; Mengel, Rudolf; Schoetensack, Wolfgang; Kraupp, Otto
PATENT ASSIGNEE(S): Byk-Gulden Lomberg Chemische Fabrik G.m.b.H., Fed. Rep. Ger.
SOURCE: Ger. Offen., 39 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2632951	A1	19770210	DE 1976-2632951	19760722
PRIORITY APPLN. INFO.:			LU 1975-73052	19750724

GI



I

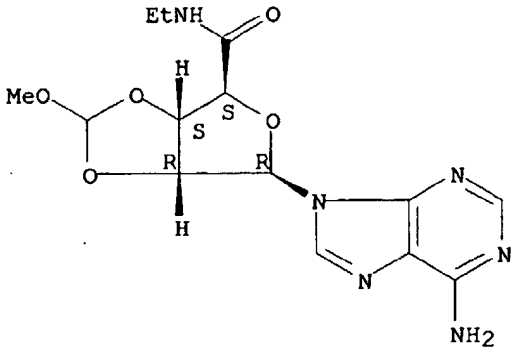
AB (Aminopurinyl)deoxyribofuranuronamides I [X = RC(OR1), R = H, Me, Et, R1 = Me, Et; R2 = NHR3, R3 = Et, Bu, CHMe2] and ester I [X = RC(OR1), R = Me,

R1 = Me, R2 = OMe], possessing inotropic and **vasodilating** activities, were prepd. in 31-96% yields by a.) aminolysis of I [X = MeC(OMe), R2 = OMe], b.) acylation of I (X = H2, R2 = NHR3) by RC(OR1)3, and acylation of I (X = H2, R2 = OMe) using RC(OR1)3.

IT **62622-77-9P 62622-78-0P 62622-79-1P**
62622-80-4P 62622-81-5P 62622-82-6P
62622-83-7P 62622-84-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

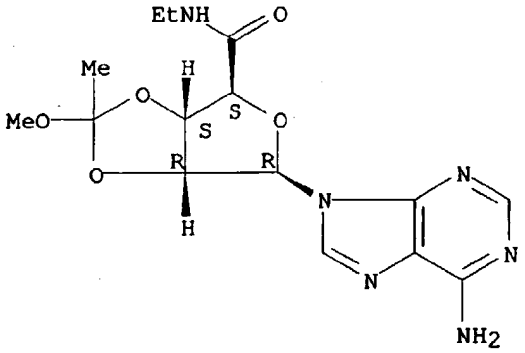
RN 62622-77-9 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(methoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



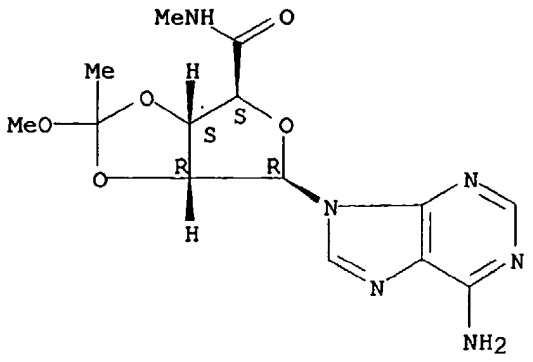
RN 62622-78-0 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-N-ethyl-2,3-O-(1-methoxyethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



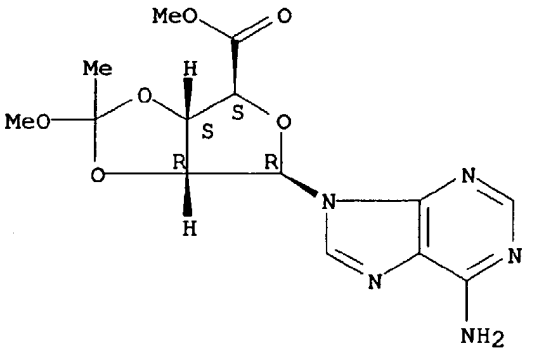
RN 62622-79-1 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methoxyethylidene)-N-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



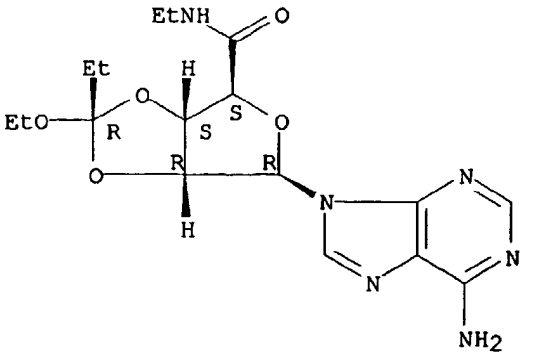
RN 62622-80-4 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methoxyethylidene)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



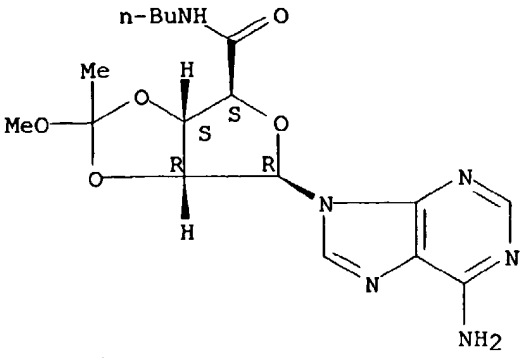
RN 62622-81-5 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-ethoxypropylidene)-N-ethyl-, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



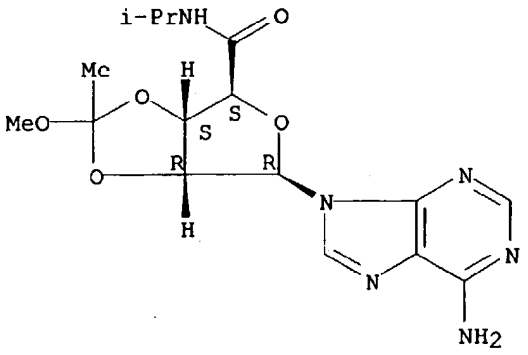
RN 62622-82-6 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-N-butyl-1-deoxy-2,3-O-(1-methoxyethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



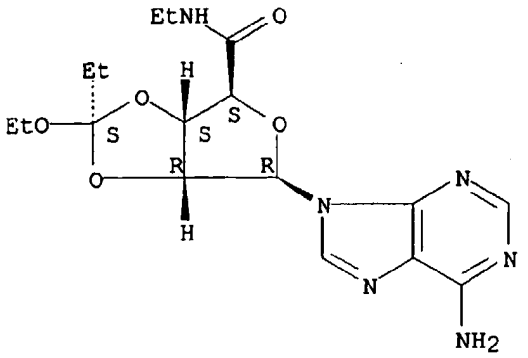
RN 62622-83-7 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methoxyethylidene)-N-(1-methylethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

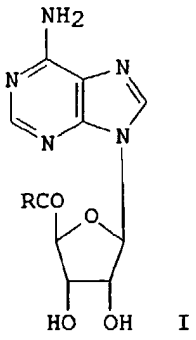


RN 62622-84-8 HCAPLUS
CN .beta.-D-Ribofuranuronamide, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-ethoxypropylidene)-N-ethyl-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 36 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1976:516540 HCAPLUS
DOCUMENT NUMBER: 85:116540
TITLE: Modification of the 5' position of purine nucleosides. 1. Synthesis and biological properties of alkyl adenosine-5'-carboxylates
AUTHOR(S): Prasad, Raj N.; Fung, Anthony; Tietje, Karin; Stein, Herman; Brondyk, Harold D.
CORPORATE SOURCE: Abbott Lab., Ltd., Montreal, QC, Can.
SOURCE: Journal of Medicinal Chemistry (1976), 19(10), 1180-6
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



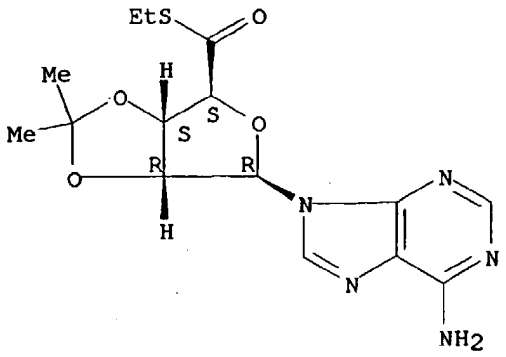
I

AB Of 16 title esters (I; R = lower alkyl, substituted alkyl, allyl, propargyl, cyloalkyl), prepd. by the reaction of the appropriate alc. with adenosine-5'-carboxylic acid chloride [41110-75-2], most were nontoxic and caused prolonged increases in coronary sinus PO2 when administered to anesthetized dogs. The Et ester (I, R = Et) [50663-70-2] was most active, giving a rapid increase of PO2 on the order of 100% lasting .apprx.30 min when given i.v. at 50 .mu.g/kg. Structure-activity relations were discussed.

IT **59882-05-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)

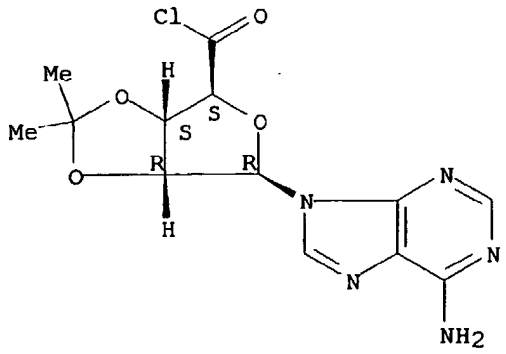
(prepn. and cleavage of)
RN 59882-05-2 HCAPLUS
CN .beta.-D-Ribofuranuronothioic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-, S-ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



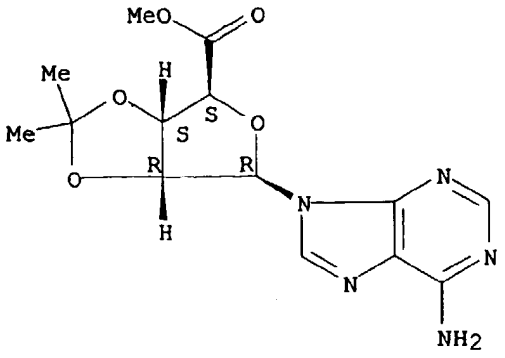
IT **39491-49-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction with alcs.)
RN 39491-49-1 HCAPLUS
CN .beta.-D-Ribofuranuronoyl chloride, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



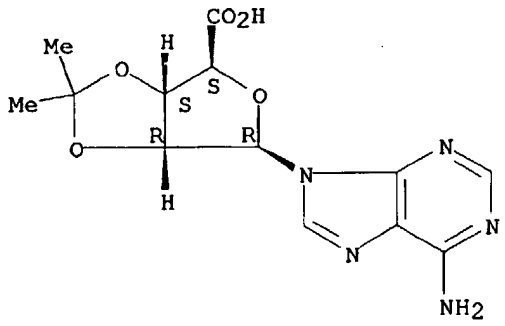
IT **23754-29-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and **vasodilating** activity of)
RN 23754-29-2 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **59882-06-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 59882-06-3 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-, monosodium salt (9CI) (CA INDEX NAME)

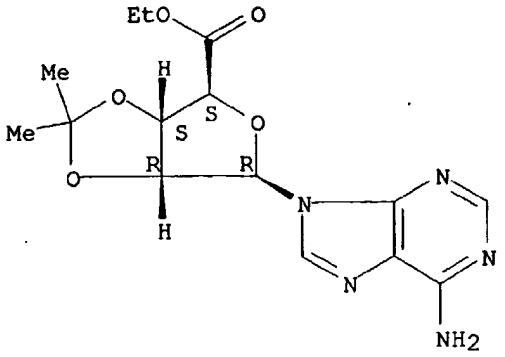
Absolute stereochemistry.



● Na

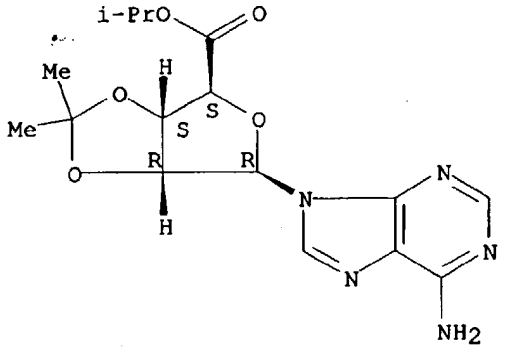
IT **35803-48-6P 35803-49-7P 41110-90-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as **vasodilator**)
RN 35803-48-6 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



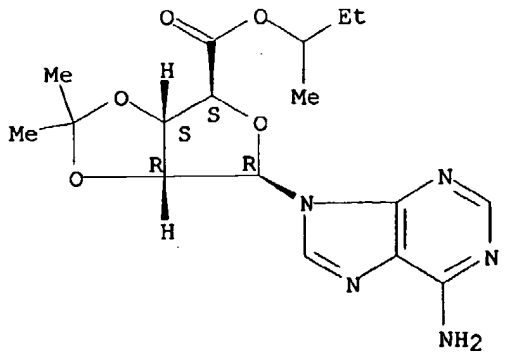
RN 35803-49-7 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2',3'-O-(1-methylethylidene)-, 1-methylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



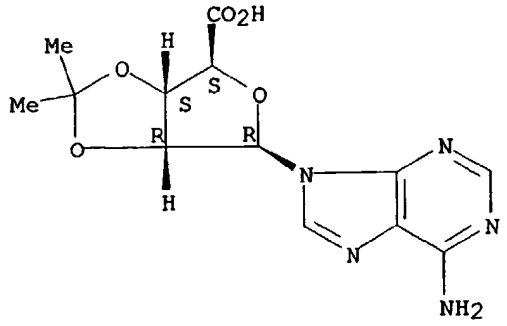
RN 41110-90-1 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-, 1-methylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **59881-97-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with alkyl halide)
RN 59881-97-9 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)-, monothallium(1+) salt (9CI) (CA INDEX NAME)

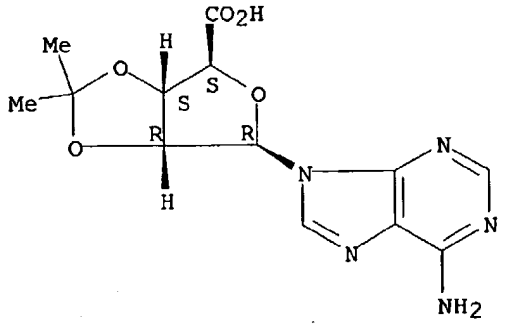
Absolute stereochemistry.



● Tl(I)

IT **19234-66-3**
RL: BIOL (Biological study)
(vasodilator)
RN 19234-66-3 HCAPLUS
CN .beta.-D-Ribofuranuronic acid, 1-(6-amino-9H-purin-9-yl)-1-deoxy-2,3-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 37 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1975:514827 HCAPLUS
DOCUMENT NUMBER: 83:114827
TITLE: 2-Alkoxyadenosines
INVENTOR(S): Honjo, Mikio; Marumoto, Ryuji; Yoshioka, Yoshio
PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 50053393	A2	19750512	JP 1973-105286	19730918

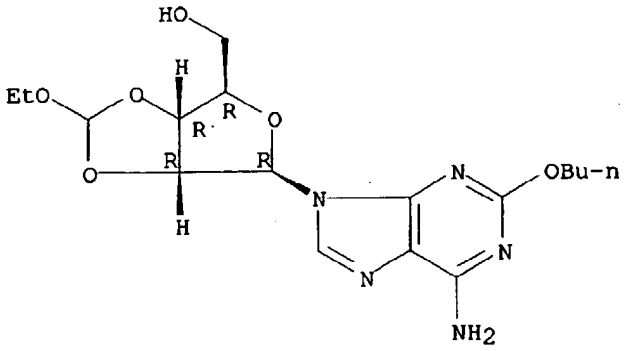
PRIORITY APPLN. INFO.: JP 1973-105286 19730918

AB 2-Haloadenosines, where the 2'- and 3'-OH groups are protected, are treated with an aliph. alc. and base to give 2',3'-protected 2-alkoxyadenosines. 2-Alkoxyadenosines are prepd. by hydrolysis. The protected products have coronary **vasodilatory**, hypotensive, and diuretic activities (no data). Thus, a mixt. of 6.6 g 2-chloroadenosine, 55 ml HC(OEt)3, 10 ml DMF, and 0.8 g p-toluenesulfonic acid was stirred at 30.degree. for 0.5 hr, poured into aq. NaHCO3, and extd. with CHCl3 to give 2',3'-O-ethoxymethylidene deriv. which was heated with 3 g NaOH in 62 ml BuOH at 90.degree. for 1 hr to give 2',3'-O-ethoxymethylidene-2-butoxyadenosine. Hydrolysis in 40% aq. AcOH at 35.degree. for 2 days gave 2-butoxyadenosine. Similarly prepd. was 2-pentyloxyadenosine.

IT **56720-42-4P 56720-43-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

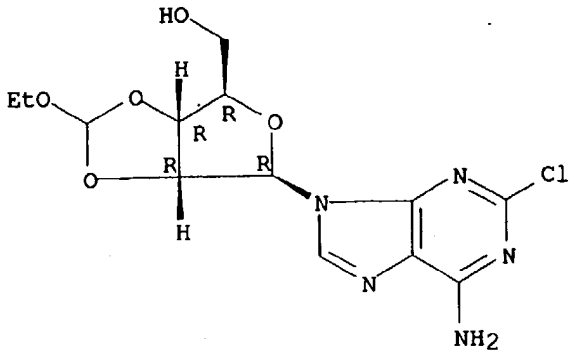
RN 56720-42-4 HCAPLUS
CN Adenosine, 2-butoxy-2',3'-O-(ethoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 56720-43-5 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(ethoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



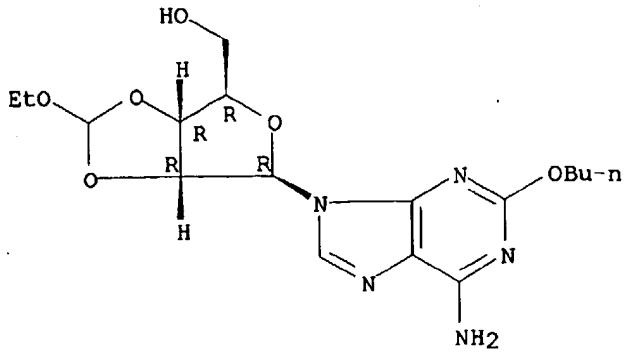
L29 ANSWER 38 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1975:479518 HCAPLUS
DOCUMENT NUMBER: 83:79518
TITLE: Synthesis and coronary **vasodilating** activity of 2-substituted adenosines
AUTHOR(S): Marumoto, Ryuji; Yoshioka, Yoshio; Miyashita, Osamu; Shima, Shunsuke; Imai, Kinichi; Kawazoe, Katsuyoshi; Honjo, Mikio
CORPORATE SOURCE: Cent. Res. Div., Takeda Chem. Ind., Osaka, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1975), 23(4), 759-74
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English

AB 2-Haloadenosines were prepd. by acetylation of 2-haloinosines followed by chlorination and amination. 2-Alkoxyadenosines were prepd. by protection of 2'- and 3'-OH groups of 2-chloroadenosine (I) or 2-chloroinosine, followed by substitution of the C atom with alkoxy group. The reaction of 5-amino-4-cyano-1-.beta.-D-ribofuranosylimidazole with CS2 afforded 2,6-di-mercapto-9-.beta.-D-ribofuranosylpurine, which was converted to 2-mercaptoadenosine and its S-substituted derivs. 2-Phenylaminoadenosine (II) was prepd. from 2-phenylamino-2',3',5'-tri-O-acetylinosine, which was prepd. by acetylation of 2-phenylaminoinosine with AcCl in HOAc. O-substituted 2-hydroxyadenosines, S-substituted 2-mercaptoadenosines, N2-substituted 2-aminoadenosines, 2-alkyl- and -aryl-adenosines were prepd. among which several compds. had coronary **vasodilating** potency. II showed not only a strong potency, but also a longer duration of the effect than that of I.

IT **56720-42-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and deblocking of)

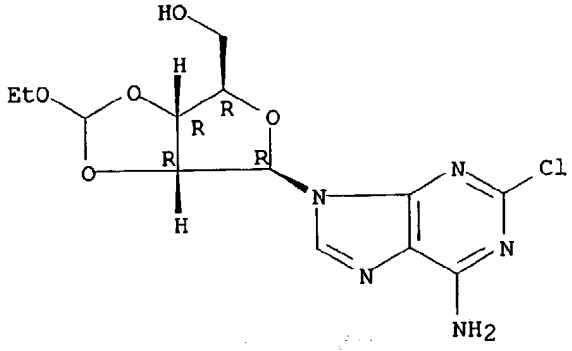
RN 56720-42-4 HCAPLUS
CN Adenosine, 2-butoxy-2',3'-O-(ethoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **56720-43-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 56720-43-5 HCAPLUS
CN Adenosine, 2-chloro-2',3'-O-(ethoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 39 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1974:10272 HCAPLUS
DOCUMENT NUMBER: 80:10272
TITLE: Ethyl adenosine-5'-carboxylate. Potent vasoactive agent in the dog
AUTHOR(S): Stein, Herman H.
CORPORATE SOURCE: Dep. Gen. Pharmacol., Abbott Lab., North Chicago, IL, USA
SOURCE: Journal of Medicinal Chemistry (1973), 16(11), 1306-8
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Et adenosine-5'-carboxylate (I) [35803-57-7] produced a marked, long-lasting increase in coronary sinus pO2 in dogs, indicating that I functioned as a coronary **vasodilator**. I was effective when given i.v. (.leq.0.10 mg/kg), intraduodenally, or orally (.geq.0.15 mg/kg). I was not a substrate or an inhibitor for an adenosine deaminase [9026-93-1] or adenylate deaminase [9025-10-9], and was apparently not

metab. by the organism. The instantaneous effect of I after i.v. administration suggested a direct action on cardivascular receptors. The toxicity of I was >1000 mg/kg orally and .sim.700 mg/kg i.v.

IT **362-75-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidn. of)
RN 362-75-4 HCAPLUS
CN Adenosine, 2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.